

State of Nevada FirstNet Statewide Meeting

September 9, 2015





Meeting Agenda

- Introductions/Background Information
- FirstNet Overview
- NV FirstNet Project Overview BREAK
- Stakeholder Discussion
- Capacity and Coverage Requirements Overview BREAK
- Data Collection & Survey Submission Session
- Questions &Answers
- Closing Remarks





FirstNet Overview

Robert LeGrande, II
Project Executive (C)





Vision for Public Safety





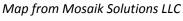


Nationwide Vision



PUBLIC SAFETY NEEDS

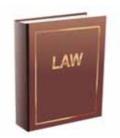
- ✓ Dedicated Spectrum
- ✓ Priority / Preemption
- ✓ Public Safety Grade
- **✓** Cybersecurity
- **✓ Public Safety Applications**







Implementing the Vision



THE LAW 2.22.12

FirstNet becomes law PL 112-96

GOVERNANCE



The FirstNet Board has **15** members, including those with telecommunications and public safety backgrounds

Each Governor appoints 1 Single Point of Contact (SPOC) and governing body to represent the state's interests to FirstNet

40 member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters

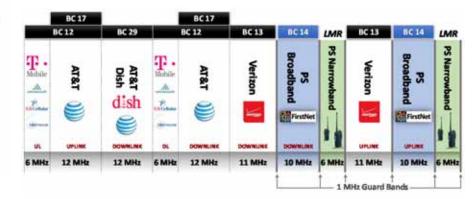
FUNDING



\$7B authorized to build the FirstNet network. Funded by spectrum auctions through 2022

BAND CLASS (BC) 14

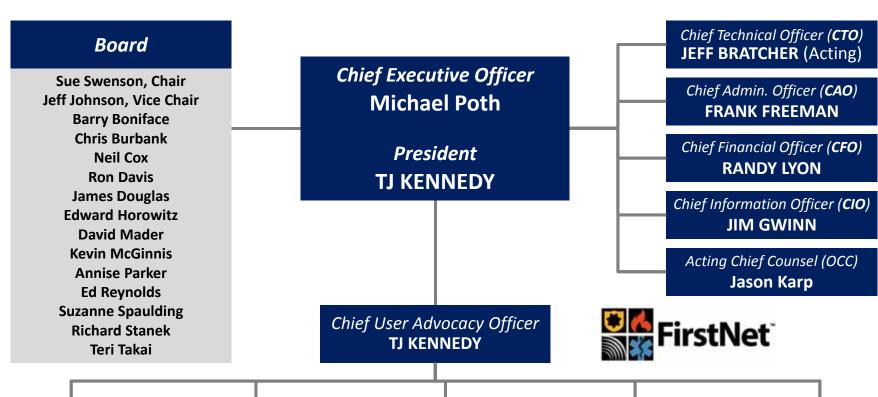
20MHz of bandwidth has been dedicated to public safety in the prime upper 700MHz frequency range







FirstNet Organization



Director of
State Consultation
DAVE BUCHANAN

Claudia Wayne

Director of State Plans RICHARD REED

Brian Hobson Doug Harder Director of Outreach
AMANDA HILLIARD

Jeremy Zollo (State/Local)
Carl Rebstock (Tribal)
Chris Algiere (Federal)
Kristi Wilde (SPOCs)
Vicki Lee (Associations)

Director of
Government Affairs
ED PARKINSON

Justin Shore Thomas Shull Director of Communications (Acting)

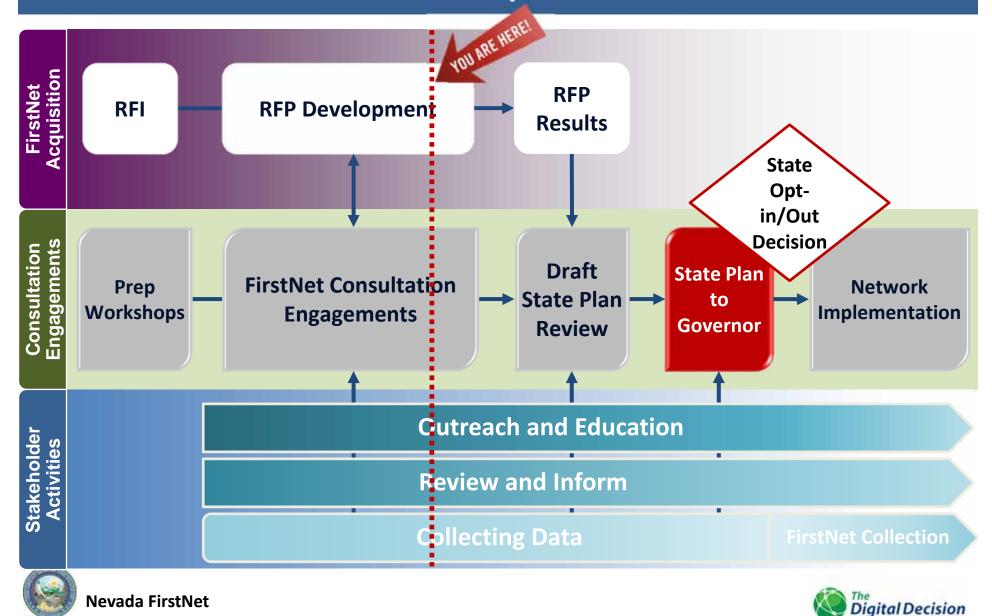
RYAN OREMLAND

Kyle Richardson

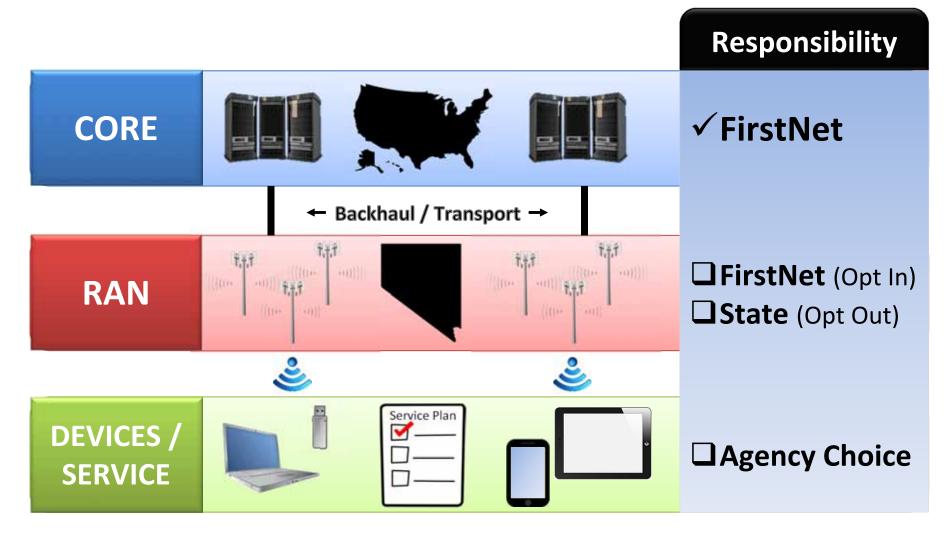




FirstNet Development Process



Network Components and Choices







Need Inputs to Get Answers

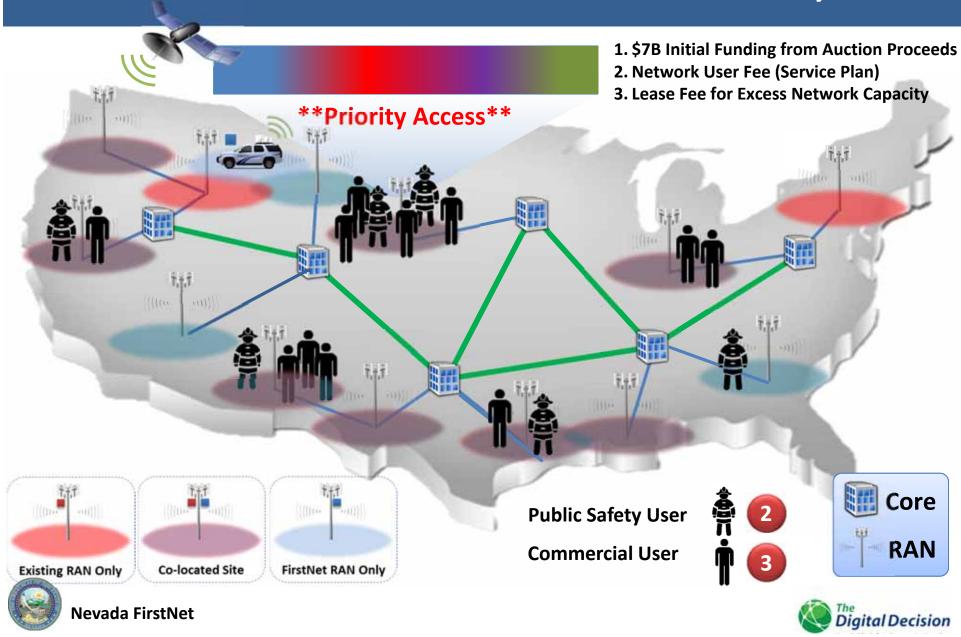


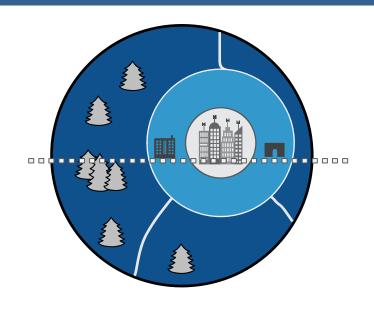


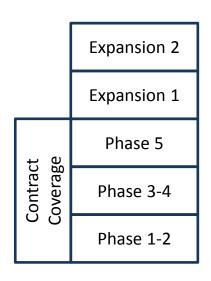


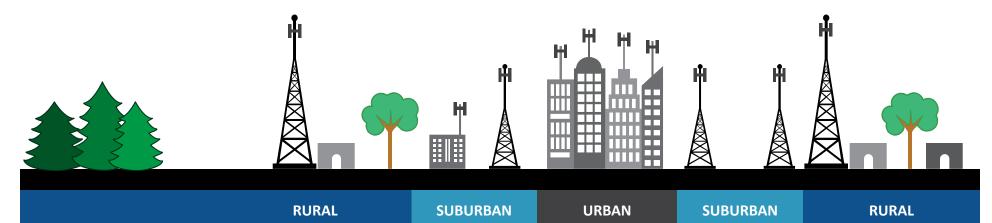


Revenue, Architecture & Priority



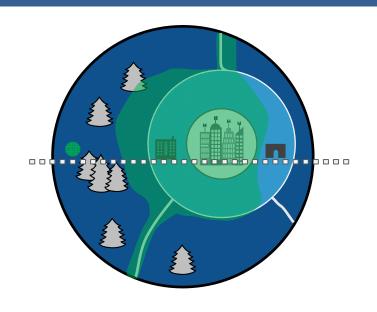


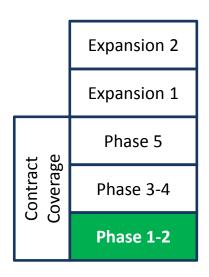


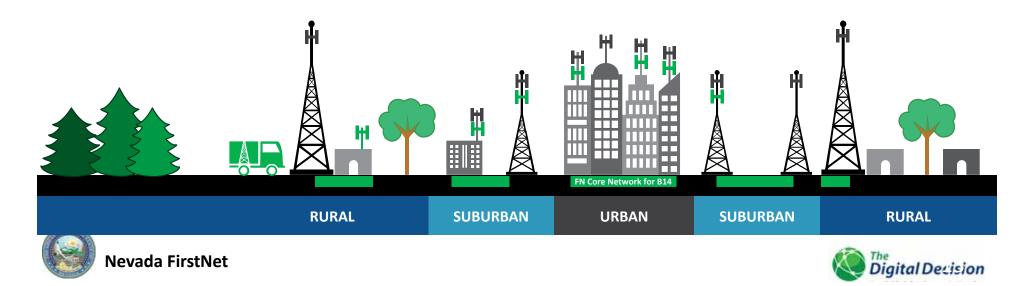


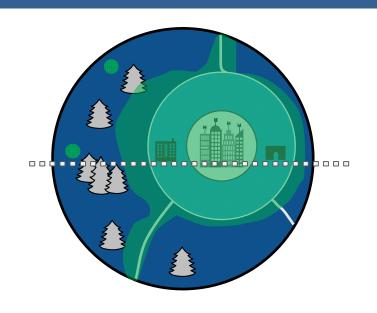


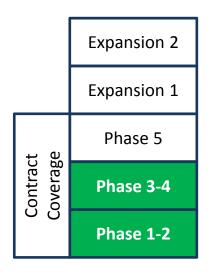


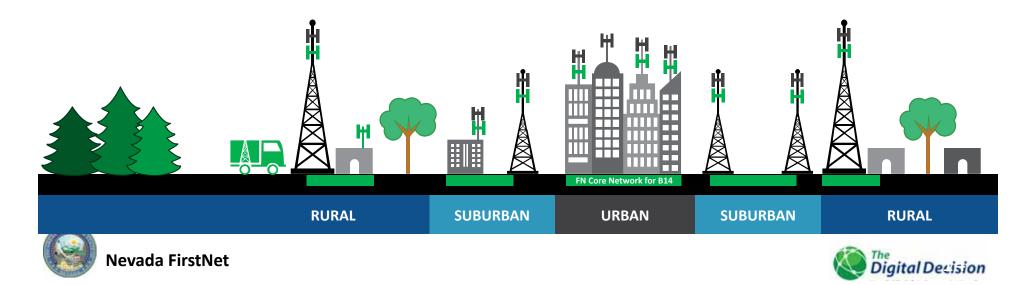


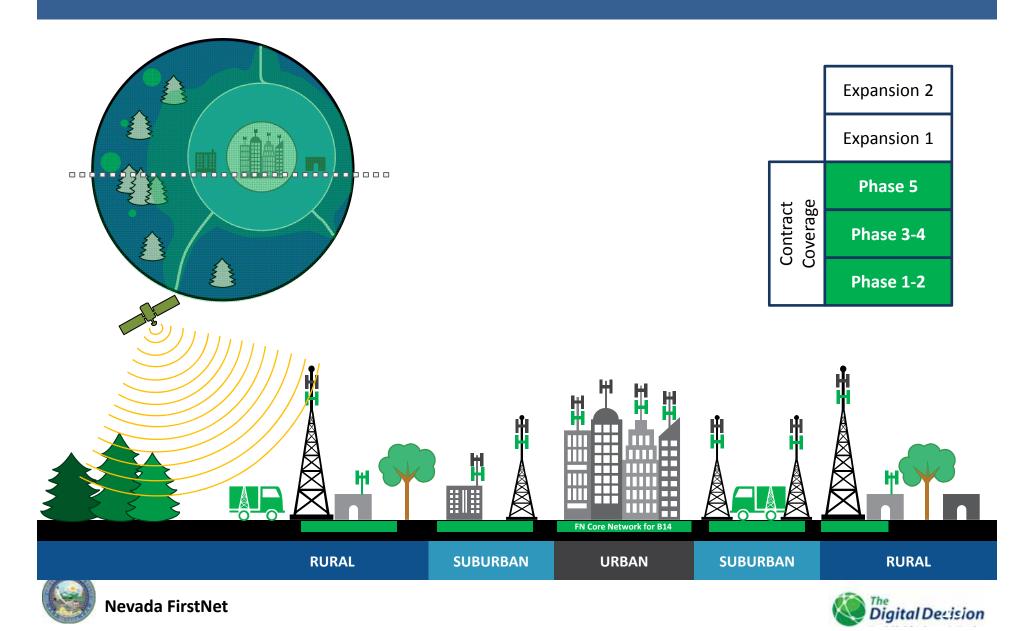


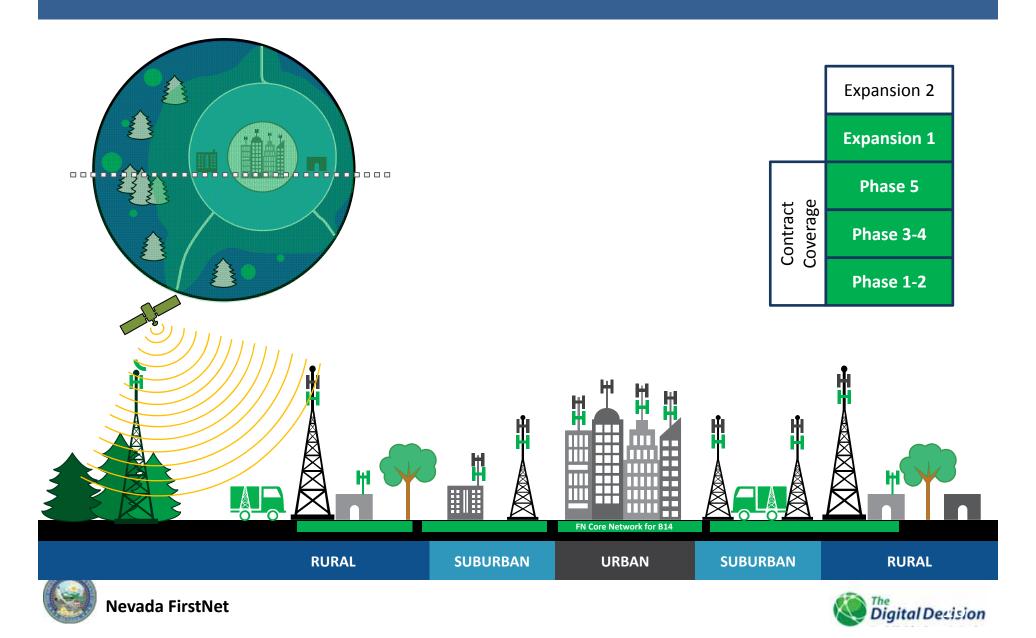


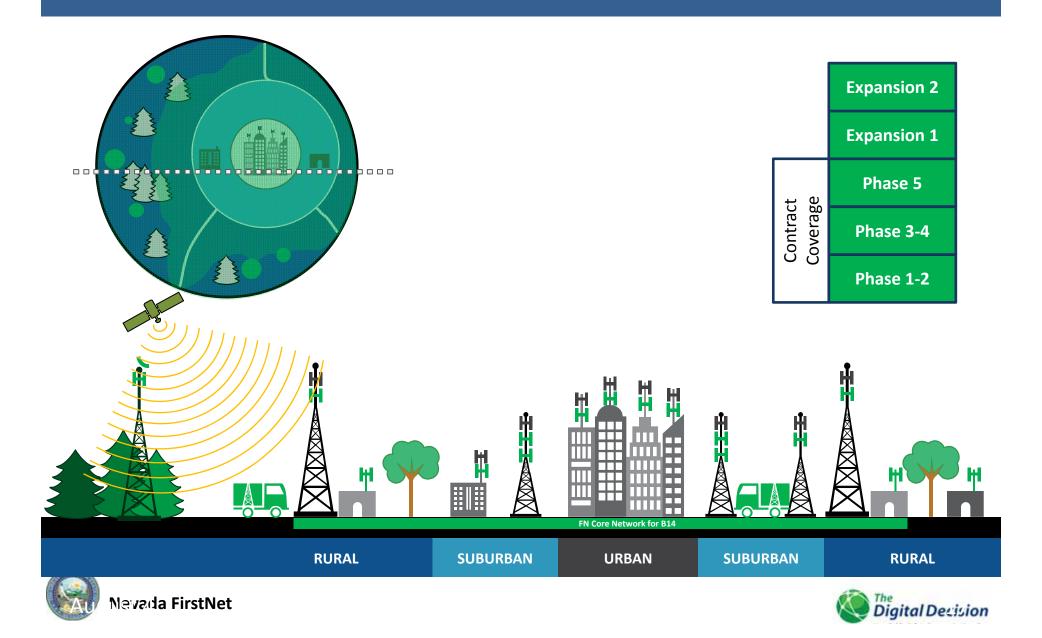












Rural Deployment

Requirements of the Act

"...shall require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network"

 State Consultation Topic – identifying coverage objectives and inputs on a phased deployment

Fiscal Approach

Nationwide Reinvestment of Revenues
(As proposed in 2nd public notice)

Potential Technical Options

- High power tower sites
- High power devices
- Deployable solutions (including SATCOM)



Contractual Measures

- Considering RFP incentives for rural
- Network policies with partner(s) to evaluate existing infrastructure beyond initial deployment

Note: The definition of rural does not determine coverage, our resources will determine coverage. The definition of rural will be used to measure whether substantial rural milestones have been included in each phase of deployment. Being included in the definition of rural does not guarantee coverage, nor does being excluded from it deny coverage.





What is a State Plan?

- Contains the Information the Act Requires
- Contains the Information the State Desires
- Captures a Snap Shot in Time
- Allows the Governor to Make an Informed Decision on the FirstNet Value
- Is a Non-Binding Document
- Is Implementable and Affordable
- Supports the FCC and NTIA in Evaluation of a State's Alternative RAN Plan

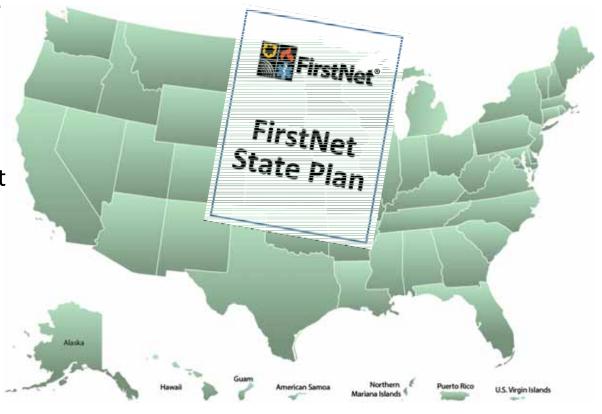




State Plan Process

Under the Act, the Governor has 90 days to choose whether to

- 1. Participate in the FirstNet proposed radio access network (RAN) deployment or
- Assume responsibility to conduct its own state RAN deployment







FirstNet Network Benefits



Dedicated to Public Safety



Public Safety
Apps /
Services

QoS, Priority & Preemption (QPP)



Situational Awareness





Local Control



Public Safety Grade





"FirstNet must provide a service that is compelling to public safety in order to earn your business."

Sue SwensonChairwoman, FirstNet

WHY: There is NO Federal or State Mandate to use the Network...





Outreach and Education

Twitter (@FirstNetGov)

Google+ (+FirstNetGov)

YouTube (FirstNetGov)

Flickr (FirstNetGov)

inkedIn

SPOC List:

www.firstnet.gov/consultation PSAC:

www.firstnet.gov/about/publicsafety-advisory-committee



- Fact Sheets
- Blogs
- Presentations
- Current Events
- Board meetings and materials



State Consultation

- State/Local Outreach Activities
- Public Comment
- Environmental & Historic/Cultural Topics (PEIScomments@firstnet.gov)





NV-FirstNet Project Overview

Dennis Cobb NV-FirstNet Project Manager (C)





NPSCC Members

Representatives from the Below Agencies

Nevada Public Safety Communications Committee

Director DPS

State CIO

Chief; Division of Emergency Management

Statewide Interoperability Coordinator Nevada Department of Transportation

Nevada National Guard

Homeland Security Commission

Nevada Sheriffs' and Chiefs' Association Nevada Fire Chiefs Association

Inter-Tribal Council of Nevada

Nevada System of Higher Education

Las Vegas Metropolitan Police

Department

... _....

Nevada Hospital Association

Southern Nevada Area Communications Council

Washoe County
Regional
Communications
System

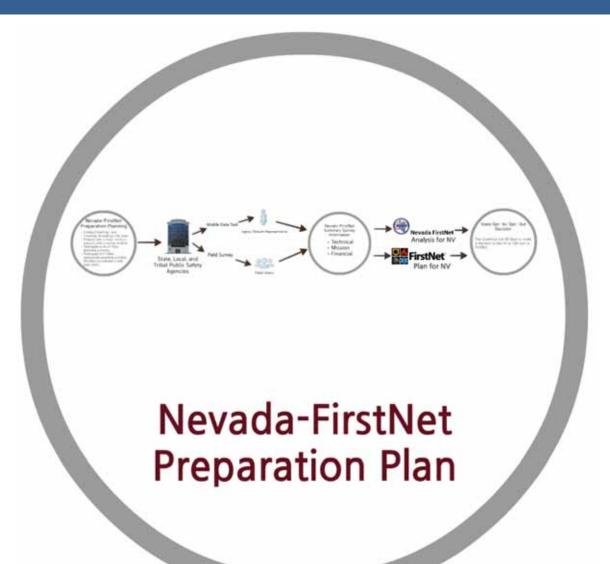
NV Energy

Public Safety Agency from County less than 100,000

US Dept. of Homeland Security





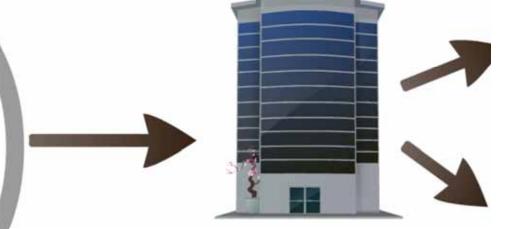






Nevada-FirstNet Preparation Planning

- Conduct briefings and meetings throughout the state
- Prepare user surveys, conduct capacity and coverage analysis
- Participate in multi-state planning activities
- Participate in FirstNet nationwide planning activities (FirstNet consultations with each state)



State, Local, and Tribal Public Safety Agencies



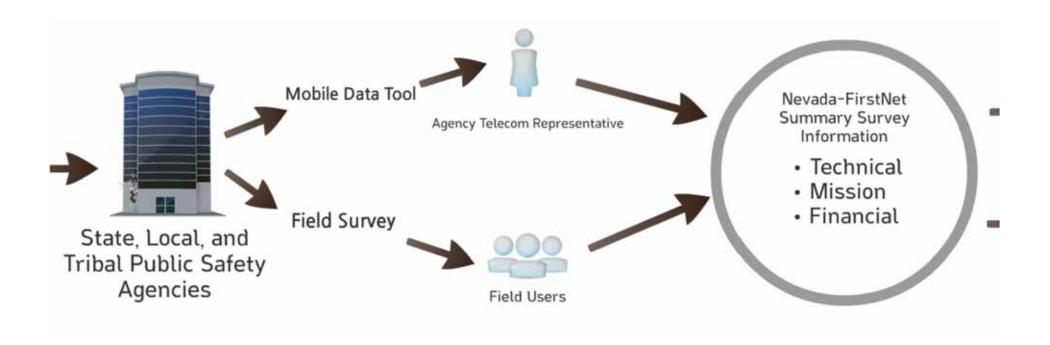


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Nevada-FirstNet Preparation Online Survey

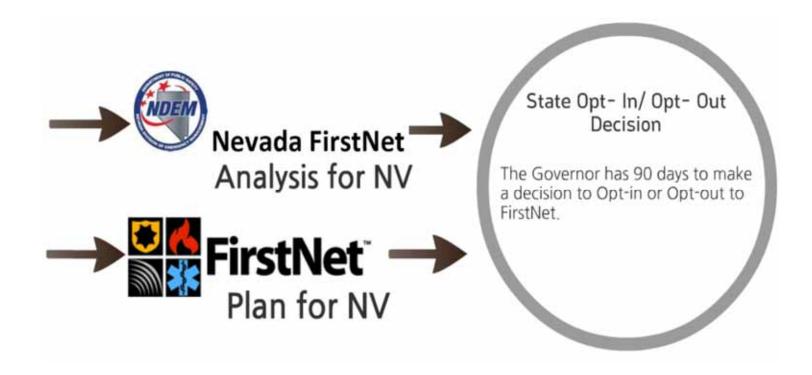
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- Designed to collect the essential information for Nevada in preparation for state consultation
- Questions are focused on gathering the current and future requirements for Public Safety Data Communications, as well as current coverage information.





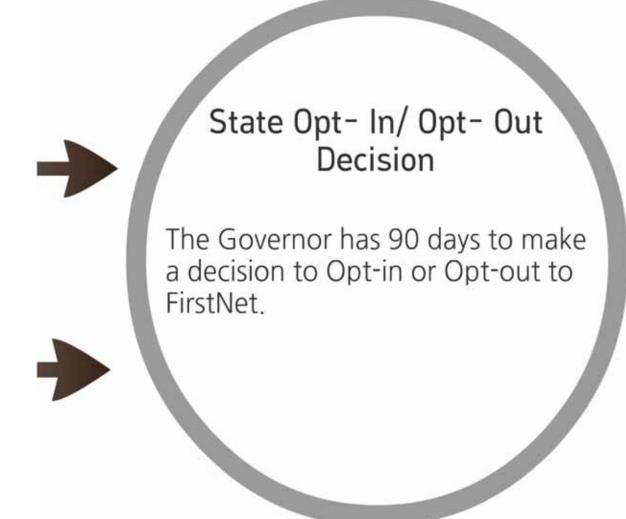
















Stakeholder Discussion

Col. Ken Morckel (Ret.)

NV-FirstNet PS SME (C)





Stakeholder Inputs



State Consultation

- 1. Construction of a Core and RAN build out
- 2. Placement of towers
- 3. Coverage areas of the network
- 4. Adequacy of hardening, security, reliability, and resiliency
- 5. Assignment of priority to local users
- 6. Assignment of priority and selection of entities seeking access to or use of the network
- 7. Training needs of local users





Stakeholder Inputs Critical

Coverage

Where?

- Where Needed (Objectives)
- Different Device Types
- Throughput levels

Capacity

How Much?

- # of Users and Devices
- Application Usage
- Data Consumption

FirstNet Financial Team

- Request for Proposals (RFP)
 Development/Evaluation
- Economic Modeling



FirstNet Baseline

FirstNet Engineering Team

- RFP Development/Evaluation
- Core, radio access network (RAN) and Devices





Our Stakeholders are the Key to Our Success

The ability to make the best decision depends on the amount of information gathered







Break





Capacity and Coverage Requirements Overview

Gene Robinson

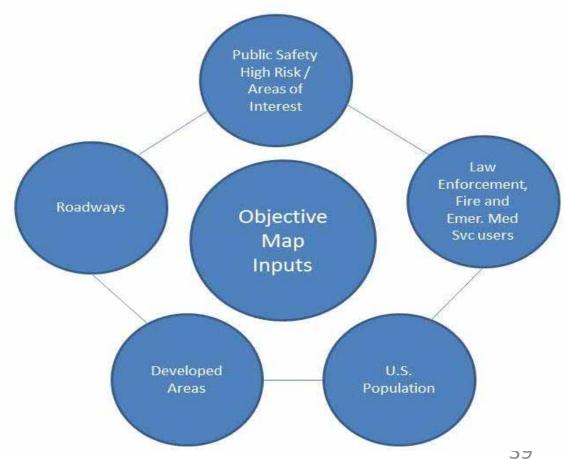
NV-FirstNet Technical SME (C)







Coverage and Capacity Study FirstNet Data Collection Elements









Step 1

Develop Coverage and Capacity Study Inputs

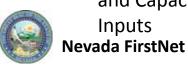
Inputs

- NV Agency/User
 Survey Results and
 PSAP Data (if
 available)
- NV Baseline Coverage Level Definitions and GIS model

Outputs

 Finalized Coverage and Capacity Study Inputs

Color	Coverage Area	Description
RED	High concentration	This would indicate an amount of users, areas of interest, U.S., developed areas and roadways which translate to a high likelihood for public safety responses.
BLUE	Moderate concentration	This would indicate an amount of users, areas of interest, U.S., developed areas and roadways which translate to a moderate likelihood for public safety responses.
GREEN	Low concentration	This would indicate an amount of users, areas of interest, U.S., developed areas and roadways which translate to a low likelihood for public safety responses.
GREY	On demand temporary or extended range coverage (Remote – satellite/deployable coverage)	This would indicate an amount of users, areas of interest, U.S., developed areas and roadways which translate to a low likelihood for public safety responses.





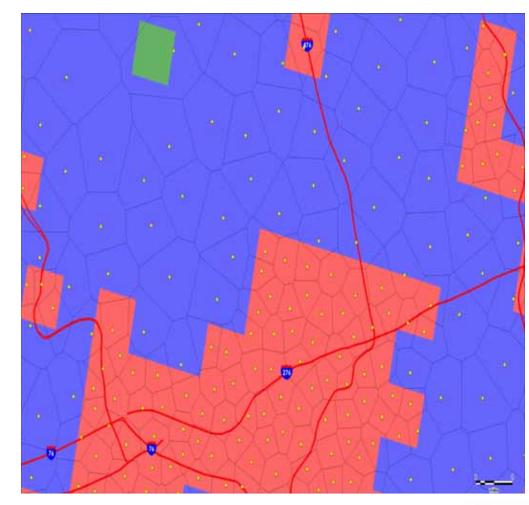


Step 2

Dimensioning

Outputs

- Nominal statewide base station count
- Representative area GIS model for each baseline coverage level









Step 3

Coverage Prediction Examples using Specialized Software

Outputs

- Comparison of baseline coverage level GIS models from the dimensioning step
- Single/multiple site coverage prediction steps









Step 4

Coverage and Capacity Study Report

Outputs

- Final Coverage and Capacity Study Report
- PSAP Data Overlay
- Coverage Objectives
- Phased Deployment

1b. Phased Deployment

INSTRUCTIONS: Provide a description of the proposed incremental deployment phases (suggest a minimum of 5) that would achieve the desired coverage objectives identified in 1a. As necessary, consider providing maps that clearly identify each incremental deployment phase.

DELIVERABLE/FORMAT: Word, PPT, PDF and, as necessary, maps in GIS compatible format (.shp, .info, .kml/.kmz, etc.)

Coverage Objective	Phased Deployment	
Objective 1	Phase	
Objective 2	Phase	
• Objective 3	Phase	
Objective 4	Phase	
Objective 5	Phase	
	12	





NV FirstNet Coverage and Capacity Study B&V Requests and Next Steps

Requested Direction from Nevada

- Electronic NV baseline data
 - Survey data
 - PSAP data
 - Coverage objective definitions
 - GIS coverage model
 - Identify critical coverage areas (nuclear power plants, dams, major events, etc.)

B&V Next Steps

- Perform Dimensioning
- Perform Coverage Prediction
 Examples using Specialized Software
- Create Final Coverage and Capacity Study Report and Meet FirstNet Requirements







Data Collection and Survey **Submission Session**

Ayrielle LeGrande
NV-FirstNet Data Collection SME (C)







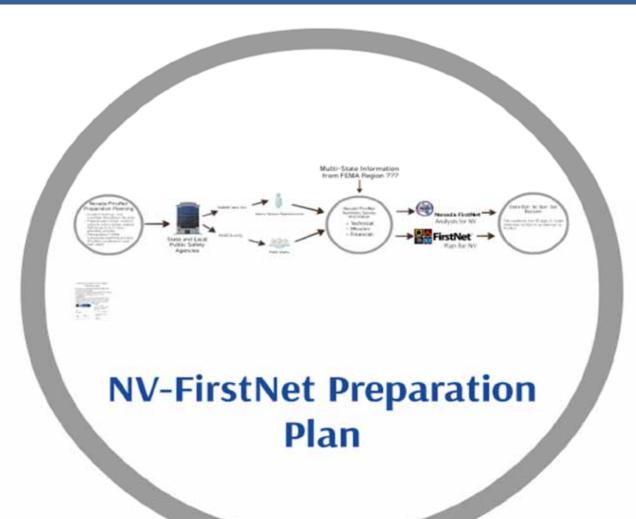
NV-FirstNet Data Collection and Survey Submission Session





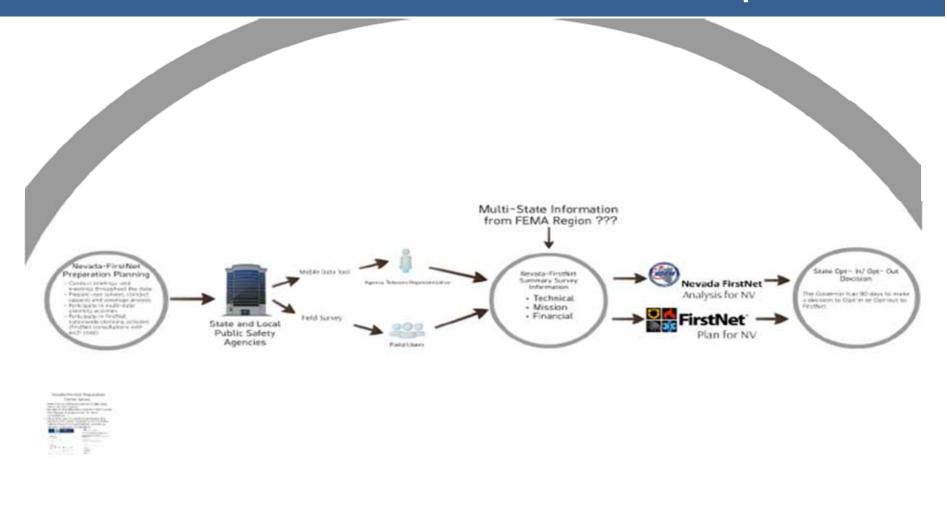


















Nevada-FirstNet Preparation Online Survey

- Information will gathered by Mobile Data Tool and User Survey
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Opening the Survey

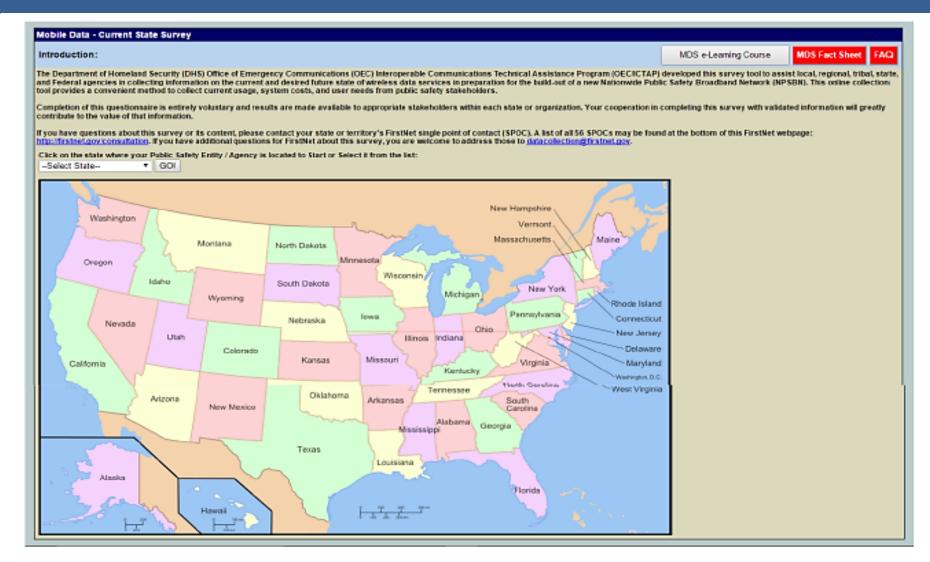
To begin the Mobile Data Tool Survey please click the link below:

http://publicsafetytools.info/mobile data surve
y/index.php

Upon clicking the link please select Nevada as your state. The following slides will guide you through the survey.

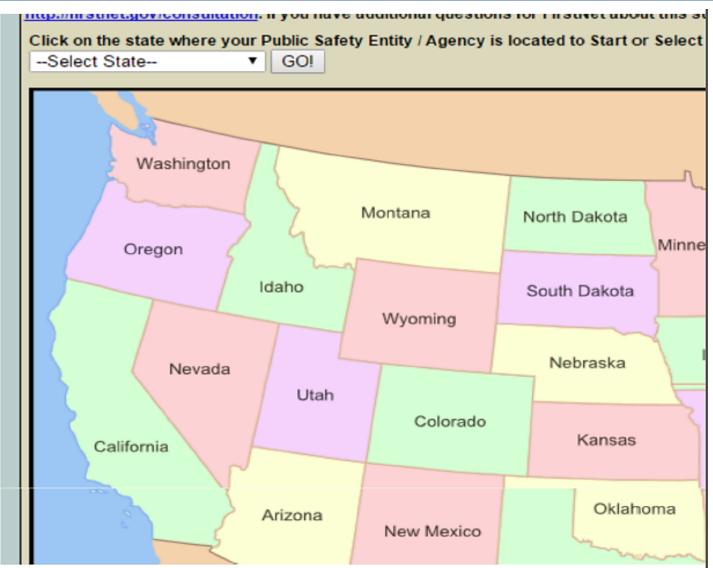
















Mobile Data - Current State Survey

Introduction:

The questions included in this survey are listed on the page below. Before continuing with the survey, please review these questions to ensure that you have the necessary information to complete the survey. A complete list of questions and answer selections is available through this link.

Agency Information

Organization type

State, County, City

Number of full time, part time employees and volunteers

Number of response or operations vehicles in your agency

Number of Voice/Data devices assigned to personnel

Number of Data only devices assigned to personnel

Use of personal devices for agency business and compensation

Use of Machine to Machine Devices (cameras, sensors)

Frequency of use and primary application used in each of 12 application categories:

Single or multiple service providers

Procurement process used

Relationship with sales/account manager for provider

Other specialized services or support from provider

Monthly cost per device for data/voice plan

Plan information, fixed/variable rate, data caps

Cost

Security

Expertise

Agency Discipline

Agency Name

Your name and contact information

Devices

Number of Voice/Data devices assigned to vehicles

Number of Data only devices assigned to vehicles

Number of Other devices assigned to vehicles

Planned changes in the numbers of devices used

Applications

Communications, Voice over IP, AVL, Locations Services, CAD, Database Inquiries, Internet/Email, Field Based

Reporting, Video, Telemetry

Service Plans

Use of commercial or shared paging systems

Other available procurement options

Relationship with technical support staff for provider

Contract duration

Monthly cost per device for data only plan

Average monthly data usage per device

Barriers

Network Reliability

Coverage







Single or multiple service providers

Procurement process used

Relationship with sales/account manager for provider

Other specialized services or support from provider

Monthly cost per device for data/voice plan

Plan information, fixed/variable rate, data caps

Cost

Security

Expertise

Quit Survey

Take Survey





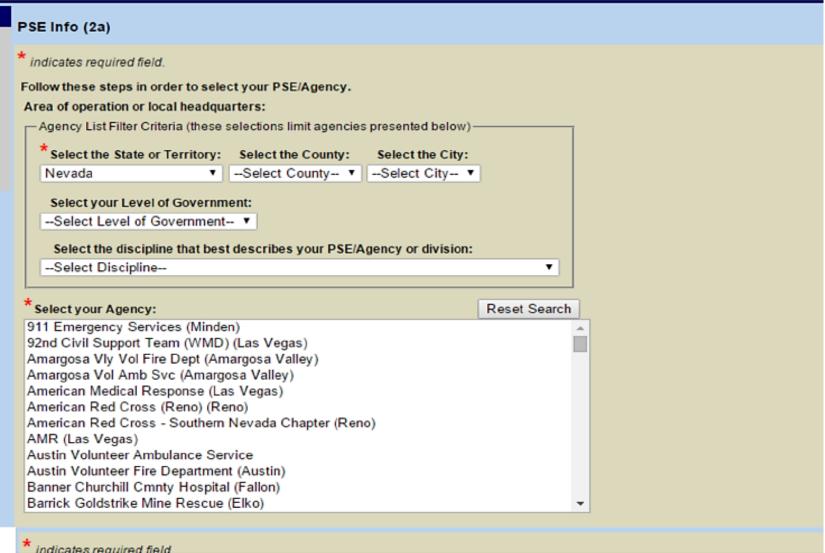
NV-FirstNet MDT Workshop – PSE Info

Public Safety Entity (PSC) Name		
Section Navigation 1. FSE late	PSE Into (32)	FA
2 Devices Page	* indicates required field.	
1 Applications	Follow Tiese steps in order to select your PSE/Apency.	
4. Carrent Frontiers	Area of operation or local beadquarters:	
5. Declara Case	Agency List Filter Orderia (these selections limit agencies presented below)	
6 SubmitSurvey	Select the State or Territory: Select the County: Select the City: Novaria	
	Select your Level of Government -Select Level of Severnment •	
	Select the discipline that bent describes your PSCApproxy or division:	
	- Select Discipline-	
	*Nection Agency: Rest Seach	
	311 Energency Services (Minden)	
	Sind Chil Sepport Tram (WMD) (Las Vegas) Amergose Viy Vol File Dept (Amergose Velley)	
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	American Medical Respense (f.er Veges) American Red Cross (Reso) (Reso)	
	American Red Cruss - Southern Nevadu Chapter (Reno)	
	AMR (Las Vegas) Austin Volunteer Ambulance Service	
	Austin Valurteer Fire Department (Austin)	
	Bonter Churchill Crasty Hospital (Fallar) Bontoh Galdrithe Mire Resourc (Elba)	
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NV-FirstNet MDT Workshop – PSE Info







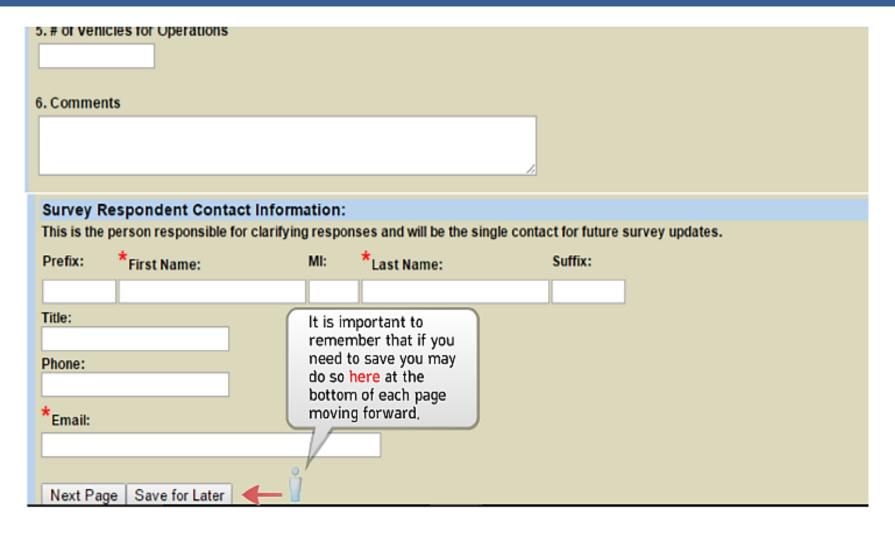
NV-FirstNet MDT Workshop – PSE Info

Austin Volunteer Fire Department (Austin)			
Banner Churchill Cmnty Hospital (Fallon) Barrick Goldstrike Mine Rescue (Elko)			
Barrick Goldstrike Mille Rescue (Elko)		<u> </u>	
* indicates required field.			
1. # of Employees			
2. # of Full Time Employees			
3. # of Part Time Employees			
4. # of Volunteers			
5. # of Vehicles for Operations			
6. Comments			
Survey Respondent Contact Informati	ion:		
This is the person responsible for clarifying responses and will be the single contact for future survey updates.			
Prefix: *First Name: M	II: *Last Name:	Suffix:	





NV-FirstNet MDT Workshop – PSE Info (Survey Respondent Contact Information)







NV-FirstNet MDT Workshop – Devices

Survey: : Carson City Health and Human Services
Devices Page (2b)
AGENCY ISSUED DEVICES : PERSONNEL A Mobile
Hatspet is a Portate Wi-Fi
1, # of Voice/Data Devices Assigned to Personnel (Smartphones, cellphones)
./
2. # of Data Devices Assigned to Personnel (USB Moderns, vehicular moderns, mobile hotspots, integrated moderns such as tablets or laptops)
3. # of Other Devices Assigned to Personnel, including private data devices
AGENCY ISSUED DEVICES - VEHICLES (not accounted for above)
POLICE I SPECE OF TICE AND ACCOUNTS TO SHOW
4. # of Voice/Data Devices Assigned to Vehicles (Smartphones, cellphones)
5. F of Data Devices Assigned to Vehicles (USB Moderns, vehicular moderns, mobile hotspots, integrated moderns such as labets or laptops)
6. # of Other Devices Assigned to Vehicles, including private data devices
PERSONALLY OWNED DEVICES
7. Are employees allowed to use personally owned devices to perform any type of work functions? Select
Are personally owned devices allowed to connect to any official applications/services i.e. email, internal databases, etc.? Select
9. Is any compensation provided to employees for use of personally owned devices?
Select ▼
GENERAL 0
10. Does your agency use Machine to Machine (M2M) devices that use wireless connections? (Cameras, sensors, etc.)
-Select - 1 Machine to Machine (MOM)
Device - any deside that communicated the communication of the communication with other returned communication without and returned devices without and returned communication.
user interaction EX: A license plate reader.
12, identify near term planned changes (if any) that could impact these device counts significantly i.e. deployment of cellular enabled tablets?
-Select-
13. Comments on Devices





NV-FirstNet MDT Workshop – Devices (Personnel & Vehicles)

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S	son City Health and Human Services	
	Devices Page (2b) AGENCY ISSUED DEVICES - PERSONNEL 1.# of Voice/Data Devices Assigned to Personnel (Smartphones, cellphones) 2.# of Data Devices Assigned to Personnel (USB Modems, vehicular modems, mobile hotspots, integrated modems such as tablets or laptops) 3.# of Other Devices Assigned to Personnel, including private data devices	
	AGENCY ISSUED DEVICES - VEHICLES (not accounted for above) 4. # of Voice/Data Devices Assigned to Vehicles (Smartphones, cellphones) 5. # of Data Devices Assigned to Vehicles (USB Modems, vehicular modems, mobile hotspots, integrated modems such as tablets or laptops) 6. # of Other Devices Assigned to Vehicles, including private data devices	
	PERSONALLY OWNED DEVICES	



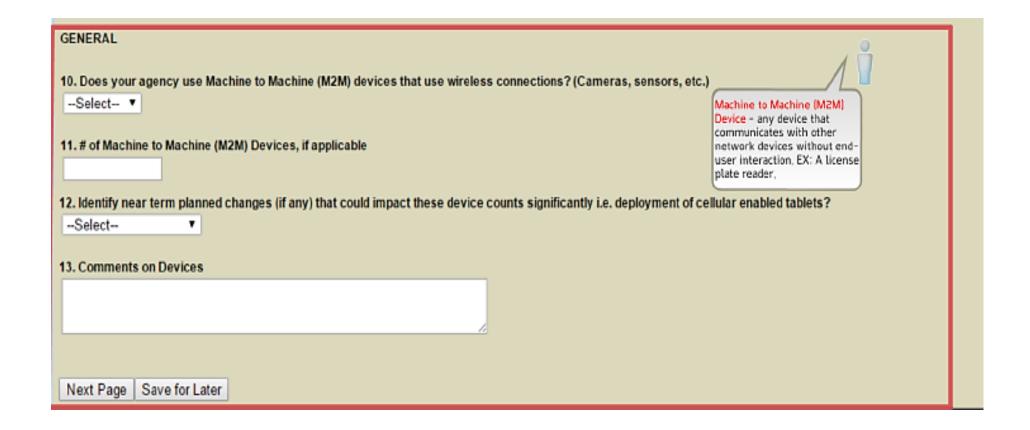


NV-FirstNet MDT Workshop – Devices (Personally Owned Devices)



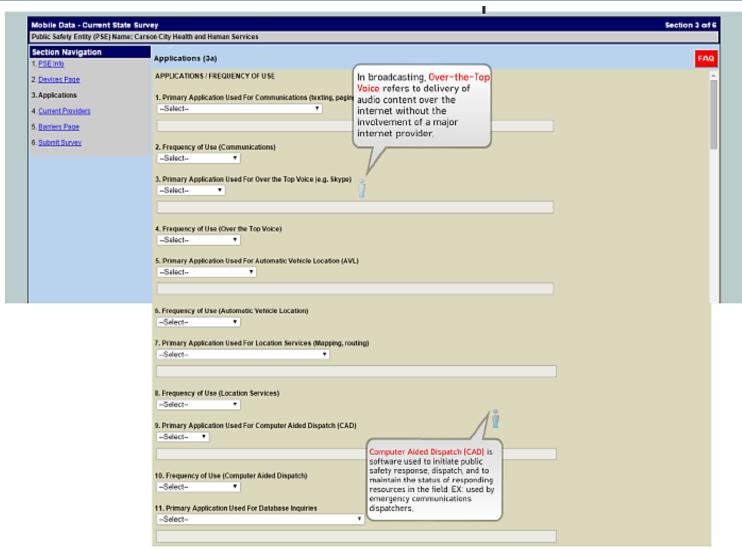


NV-FirstNet MDT Workshop – Devices (General)



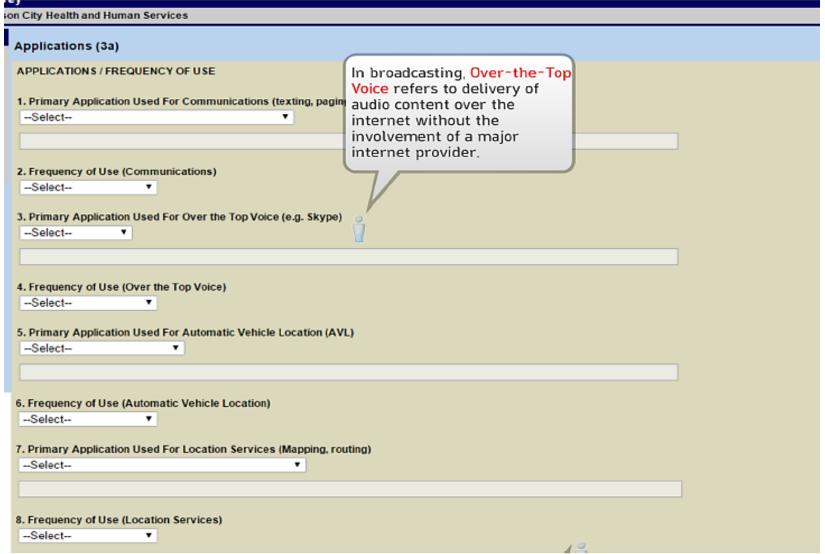






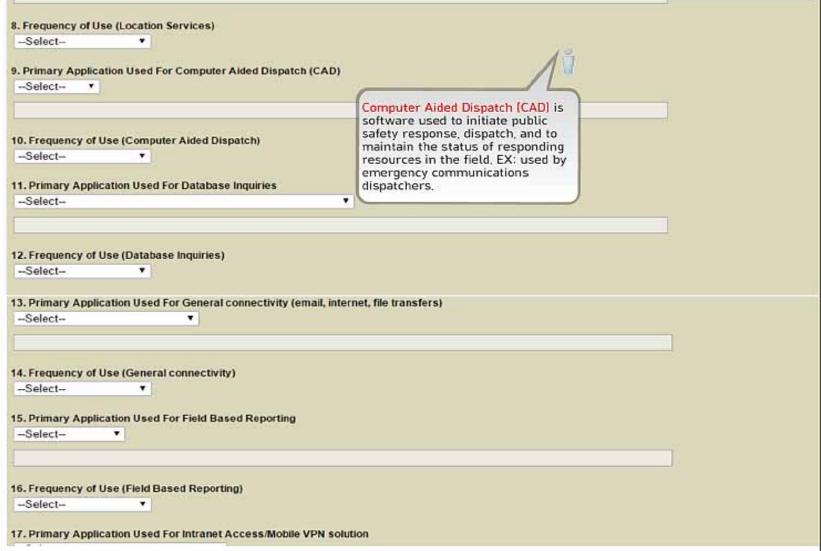














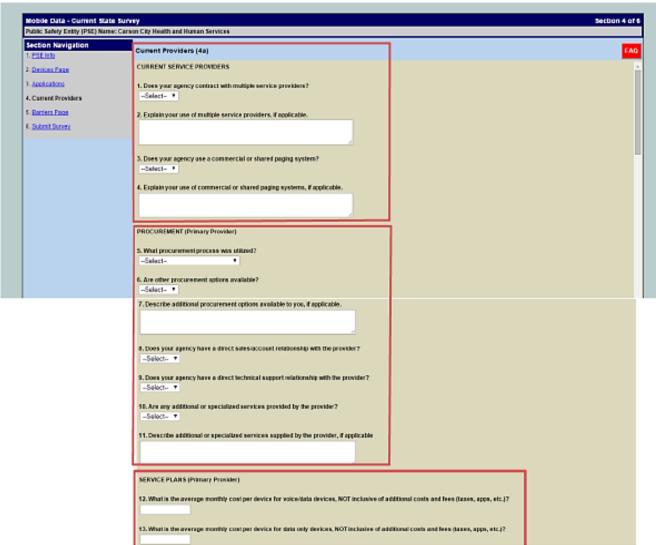








NV-FirstNet MDT Workshop – Current Providers







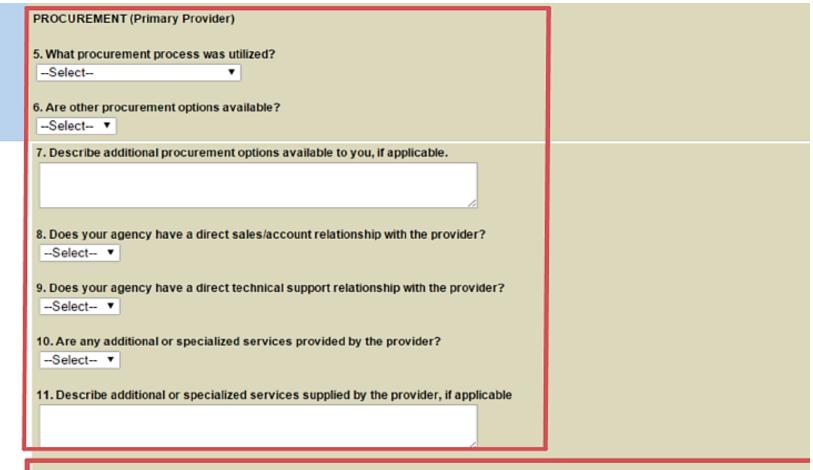
NV-FirstNet MDT Workshop – Current Providers (Current Service Providers)

urvey arson City Health and Human Services **Current Providers (4a)** CURRENT SERVICE PROVIDERS 1. Does your agency contract with multiple service providers? --Select-- ▼ 2. Explain your use of multiple service providers, if applicable. 3. Does your agency use a commercial or shared paging system? --Select-- ▼ 4. Explain your use of commercial or shared paging systems, if applicable. PROCUREMENT (Primary Provider) 5. What procurement process was utilized? --Select--





NV-FirstNet MDT Workshop – Current Providers (Procurement)



SERVICE PLANS (Primary Provider)

12. What is the average monthly cost per device for voice/data devices, NOT inclusive of additional costs and fees (taxes, apps, etc.)?





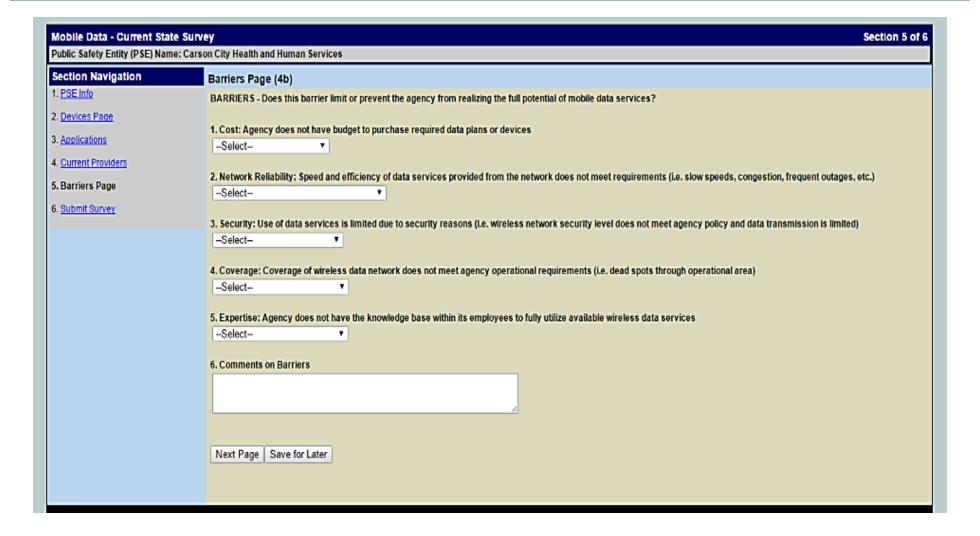
NV-FirstNet MDT Workshop – Current Providers (Service Plans)

SERVICE PLANS (Primary Provider)				
12. What is the average monthly cost per device for voice/data devices, NOT inclusive of additional costs and fees (taxes, apps, etc.)?				
13. What is the average monthly cost per device for data only devices, NOT inclusive of additional costs and fees (taxes, apps, etc.)?				
14. How important is having a fixed rate plan?				
Select ▼				
15. Who is responsible for payment of the invoice? Select 16. What are the monthly data limits on the plan?				
Select ▼				
17. What is the contract duration of your current plan (years)? Select ▼				
18. What is the average monthly data usage per user (Gb)?				
Select ▼				
19. Comments on Current Providers				
Next Page Save for Later				





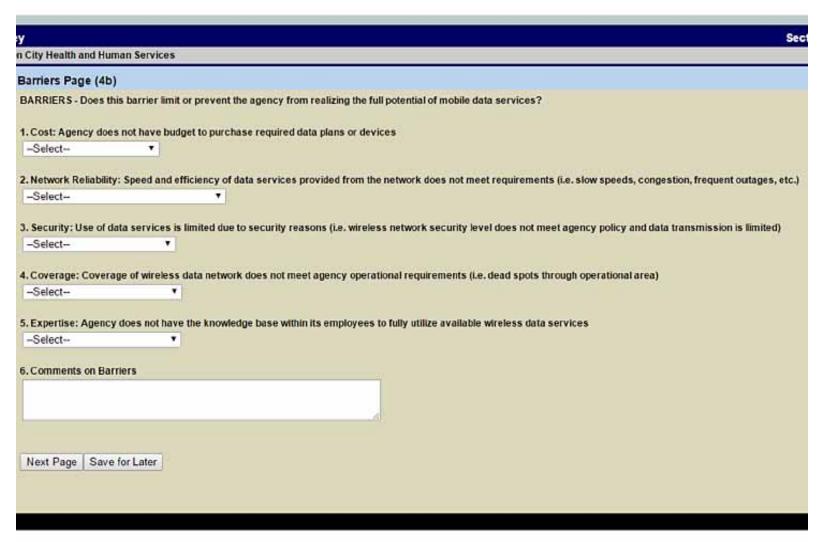
NV-FirstNet MDT Workshop – Barriers Section







NV-FirstNet MDT Workshop – Barriers Section







NV-FirstNet MDT Workshop – Submit Survey





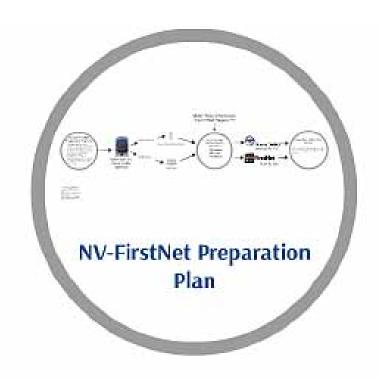


NV-FirstNet MDT Workshop – Submit Survey















Questions and Answers







Contact Us by Email

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Closing Remarks



