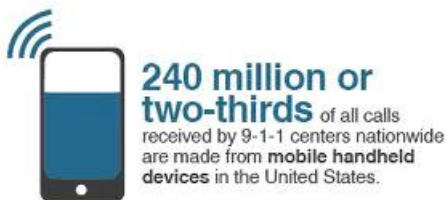


# NEXT GENERATION 9-1-1 IN MONTANA TIME TO PLAN



*"Next-Generation 9-1-1 (NextGen 9-1-1) is one of the most broadly discussed yet narrowly understood subjects within the public safety community. It is a topic that elicits both excitement and trepidation among emergency communications professionals. While there is a significant amount of valuable work being done within the industry to define what the end-state architecture will look like, many decision makers are unclear about how to get started" - Next Generation 9-1-1 - The Essential Guide to Getting Started by Intrado*



An information document compiled by the Montana State Library,  
Geographic Information Program

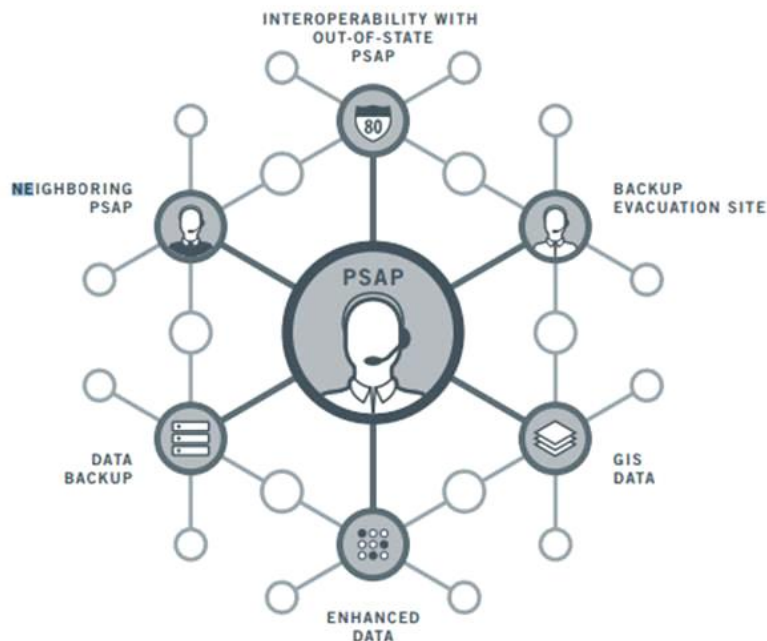


# What is Next Generation 9-1-1

Tuesday, December 23, 2014  
2:29 PM

## A Network of Networks - Source - Intrado -

<http://www.intrado.com/sites/default/files/documents/NextGen%209-1-1%20The%20Essential%20Guide%20to%20Getting%20Started.pdf>



"The existing 9-1-1 system is based on technologies that were established decades ago and is a barrier to creating an integrated emergency call management system that has the ability to exchange voice, data, text, photographs and live video through the 9-1-1 emergency communications centers. These capabilities would assist law enforcement, fire departments and emergency medical services in tailoring their response to conditions at the scene of the emergency. An advanced, integrated 9-1-1 system would also provide the ability to quickly and easily reroute emergency calls to another call center when the primary answering point is unavailable or overloaded. The incorporation of these advanced capabilities would enhance the ability to provide more efficient, effective and dynamic emergency responses. The new system is referred to as Next Generation 9-1-1 (NG9-1-1)."

Page 2, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

"NG9-1-1 is a concept that has real life deployments today. NG9-1-1 is best described as a robust system of systems that allows the public to use any device to request help or send information to the appropriate public safety agency."

NG9-1-1 is commonly viewed as an interconnected, IP-based hierarchy of local, regional, state, and national networks that would enable a more robust

interconnectivity and functionality for emergency communications applications than currently exists. The current 9-1-1 systems in North Dakota and throughout the nation are over 30 years old and are generally recognized as being limited both technically and functionally."

Page 2, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

# NG9-1-1 and FirstNet

Wednesday, December 31, 2014  
2:41 PM

## Next Generation 9-1-1 *IS NOT* FirstNet

- Next Generation 9-1-1 is new system for placing, receiving, and routing 9-1-1 calls. It's the next step in the evolution of 9-1-1, from Basic 9-1-1, to E9-1-1...
- "NG911 is an Internet Protocol (IP)-based system that allows digital information (e.g., voice, photos, videos, text messages) to flow seamlessly from the public, through the 911 network, and on to emergency responders."  
<http://www.911.gov/911-issues/standards.html>
- Next-Gen 9-1-1 is in use right now in a few places, and is currently being implemented in a lot of places
- "FirstNet is a high-speed, nationwide wireless broadband network dedicated to public safety. FirstNet will provide a single interoperable platform for emergency and daily public safety communications."  
<http://www.firstnet.gov/about>
- "FirstNet will enhance public safety communications by delivering mission-critical data and applications that augment the voice capabilities of today's land mobile radio (LMR) networks. When the FirstNet network is initially deployed, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's LMR networks. FirstNet users will be able to send and receive data, video, images, text, as well as use voice applications. They will communicate over the network and benefit from the ability to share applications. In time, FirstNet plans to offer Voice over LTE (VoLTE). VoLTE can be used for daily public safety telephone communication."  
<http://www.firstnet.gov/about/guiding-principles>
- "While similar in some ways, the two systems would serve very different purposes... Notably, next-gen 911 runs on a dedicated IP network that is terrestrial and supports emergency communications between the public and PSAPs, Hixson said [*Roger Hixson, technical director for the National Emergency Number Association (NENA)*]. Meanwhile, FirstNet primarily will operate a wireless broadband network for communications among dispatchers, first responders and others."  
<http://urgentcomm.com/ng-911/firstnet-911-leaders-call-your-spoc>
- "Well, FirstNet is not NG9-1-1, so that's not connected" [Roger Hixson in a conversation with MSL regarding NG9-1-1 and FirstNet planning in Montana]
- FirstNet is only in the initial planning phases.

## **On the other hand, it might be beneficial to consider the other when working on one of them.**

"Many think of next-gen 911 and public-safety LTE as separate initiatives, but they actually have a lot in common. In addition, each initiative will provide much greater functionality and efficiency if the other is in place at a given location."

*Next-gen 911, FirstNet LTE visions appear to be a promising match*

<http://urgentcomm.com/blog/next-gen-911-firstnet-lte-visions-appear-be-promising-match?page=1>

"Although next-gen 911 and FirstNet are perceived as complementary initiatives within the public-safety community, federal-funding support for FirstNet dwarfs the funding for next-gen 911—a situation that needs to change, according to panelists at APCO 2014 in New Orleans."

*FirstNet-like support needed for next-gen 911, APCO panelists say*

<http://urgentcomm.com/ng-911/firstnet-support-needed-next-gen-911-apco-panelists-say>

"Hilliard [*FirstNet Outreach Director Amanda Hilliard*] talked about the goals FirstNet shares with those leading the effort to transition the 911 community to IP-based technologies. That includes a mutual interest in modernizing communications systems, so telecommunicators and first responders can access and relay information in multiple formats.

It is clear that FirstNet and next-generation 911 need each other, but what's still unclear is how intertwined these systems will become.

Hilliard was asked during the webinar if the FirstNet network might be used as the backbone for a state Emergency Services IP Network (ESInet) for next-generation 911. She said that while the systems will need to work closely together, it's too early in the process to discern how that might happen technically.

"There clearly has to be integration between the two systems, because we want to ensure that as the NG 911 network evolves and you have the public sending photos or videos to the dispatch centers, we need to ensure that the telecommunicators have the capacity and the network in place to get that out to the responder in the field who might need that," Hilliard said.

<http://urgentcomm.com/ng-911/firstnet-911-leaders-call-your-spoc>

# Common Acronyms

Wednesday, December 31, 2014  
10:46 AM

-A-

ALI Automatic Location Identification  
ANI Automatic Number Identification  
ARSD Administrative Rules of South Dakota

-B-

BCF Border Control Function  
BIA Bureau of Indian Affairs

-C-

CPE Customer Premise Equipment

-D-

DOR Department of Revenue

-E-

E9-1-1 Enhanced 9-1-1  
ECRF Emergency Call Routing Function  
ENHANCE 911 Ensuring Needed Help Arrives Near Callers Employing 911  
ESInet Emergency Services Internet Protocol Network  
ESRP Emergency Services Routing Proxy

-F-

FAQ Frequently Asked Questions  
FEMA Federal Emergency Management Agency

-G-

GIS Geographic Information System

-H-

HAZMAT Hazardous Materials

-I-

ICO Implementation Coordination Office  
ID Identification

IdAM Identity and Access Management  
IETF Internet Engineering Task Force  
ILEC Incumbent Local Exchange Carrier

-L-

LIS Location Information Server  
LNG Legacy Network Gateway  
LoST Location to Service Translation  
LVF Location Validation Function

-M-

MPLS Multiprotocol Label Switching  
MSAG Master Street Address Guide

-N-

NENA National Emergency Number Association  
NG9-1-1 Next Generation 9-1-1

-P-

PIDF-LO Presence Information Data Format Location Object  
PII Personally Identifiable Information  
PRF Policy Routing Function  
PSAP Public Safety Answering Point

-Q-

QoS Quality of Service

-R-

RFP Request for Proposal

-S-

SDCL South Dakota Codified Laws

SD PUC South Dakota Public Utilities Commission

SIP Session Initiation Protocol

SSP System Service Provider

-T-

TDD Telecommunication Device for the Deaf

-U-

USDOT United States Department of Transportation

-V-

VoIP Voice over Internet Protocol

VPN Virtual Private Network

Page 30, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

# MT Dept. of Administration's Role

Monday, January 05, 2015  
9:24 AM

## **Public Safety Communications Bureau**

Public Safety Communications Bureau (PSCB) functions include planning and financial support for statewide public safety communications programs. The four programs are: State 9-1-1 Program; Public Safety Spectrum Coordination Program; State and Local Implementation Grant Program (SLIGP) and the Montana Broadband Program.

Pasted from <<http://pssb.mt.gov/default.mcpX>>

### **9-1-1 and Enhanced 9-1-1 Programs**

<http://pssb.mt.gov/911programs.mcpX>

### **Public Safety Spectrum Coordination**

<http://pssb.mt.gov/pscommunications.mcpX>

### **State & Local Implementation Grant Program (SLIGP)**

<http://pssb.mt.gov/slignp.mcpX>

### **State Interoperability Governing Board (SIGB)**

<http://sitsd.mt.gov/policy/councils/sigb/default.mcpX>

### **9-1-1 Advisory Council**

<http://pssb.mt.gov/911council/default.mcpX>



# The Role of GIS in NG 9-1-1

Thursday, January 08, 2015  
8:07 AM

Next Generation 9-1-1 (NG9-1-1) systems will rely more heavily upon GIS data to locate emergency callers. Currently, GIS data is often used to augment a 911 dispatcher's ability to locate a caller. In a NG9-1-1 environment, GIS data will become the authoritative source to route calls to the correct 911 call center and dispatch the correct responders.

Pasted from <<http://imap.maryland.gov/Pages/next-gen-911.aspx>>

Various GIS map data layers can be developed and integrated into your public safety GIS map data set, however the following key map layers are needed for 9-1-1:

- Road Centerlines
- Address Points
- PSAP Service Area Boundaries
- Other Service Area Boundaries such as law, fire, medical, coast guard, etc.
- Community Boundaries

Pasted from <<http://www.geo-comm.com/gis/map-data-development-services/>>



[The Role of GIS in Next Generation 911 \(NG9-1-1\)](#) written by Gordon Chinander and Jackie Mines of the Minnesota Department of Public Safety provides more in depth discussion regarding the role GIS data will play in NG9-1-1 systems.

Pasted from <<http://imap.maryland.gov/Pages/next-gen-911.aspx>>

GeoComm, a 9-1-1 services provider, has a couple white papers that discuss some of the GIS-related components of NG9-1-1:

- *Looking Beyond Data Synchronization for Mission Critical GIS Data*  
<http://www.geo-comm.com/wp-content/uploads/2014/09/GIS-White-Paper.pdf>
- *What You Need to Know about the Spatial Information Function*  
<http://www.geo-comm.com/wp-content/uploads/2014/06/Role-of-a-SIF-in-NG9-1-1-White-Paper-Final.pdf>
- *Why You Should Invest in an Address Point Layer*  
<http://www.geo-comm.com/wp-content/uploads/2013/07/Geo-Comm-Inc-Benefits-of-an-Address-Point-Layer.pdf>

Intrado, another 9-1-1 services provider, has some guides to getting started with NG9-1-1:  
<http://www.intrado.com/nextgen-9-1-1-guide>

# Quotes related to GIS and Next Gen 9-1-1

Tuesday, December 23, 2014  
2:30 PM

"The current legacy 9-1-1 network uses customer telephone records and tabular databases listing street names, address ranges, etc. to determine which PSAP a 9-1-1 call should be routed to. The NG9-1-1 system will use a dynamic Geographic Information System (GIS) to make emergency call routing function (ECRF) and location verification function (LVF) decisions."

Page 10, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

"...The planning and transition to NG9-1-1 will be an extensive, multi-year effort.

Conceptually, transition will begin with acquisition of the Statewide GIS data that will support critical NG9-1-1 core functions, build-out of IP networks to and between host sites and the PSAPs, installation of an IP-based host remote 9-1-1 call answering system to serve all PSAPs in the State, followed by implementation of the applications that provide next generation functionality."

Page 26, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

"Geographic Information Systems (GIS) may serve a minor role in legacy 911 systems, but it will be an integral part of next-generation system. The sooner 911 professionals realize this and start preparing, the smoother their transition to next-generation 911 will be, according to panelists at the recent APCO conference."

*GIS will become the 'hero' of 911, says APCO panelist*

<http://urgentcomm.com/ng-911/gis-will-become-hero-911-says-apco-panelist>

*Utah Mapping Resources: Well-Prepared for NextGen 9-1-1*

<http://gis.utah.gov/utah-mapping-resources-well-prepared-for-nextgen-911/>

(Good summary for GIS requirements for NG9-1-1, and how a state GIS group is working on it - similar to some of what MSL has been doing)

Looking Beyond Data Synchronization for Mission Critical GIS Data

<http://www.geo-comm.com/wp-content/uploads/2014/09/GIS-White-Paper.pdf>

(Industry white paper discussing GIS data needs and maintenance in NG9-1-1)

# Montana State Library's Role

Monday, January 05, 2015  
9:34 AM

## GIS Coordination

- 90-1-404. Land information -- management -- duties of state library.** (1) The state library shall:
- (a) serve as the administrator of the account;
  - (b) work with all federal, state, local, private, and tribal entities to develop and maintain land information;
  - (c) annually develop a land information plan that describes the priority needs to collect, maintain, and disseminate land information. The land information plan must have as a component a proposed budget designed to accomplish the goals and objectives of the plan.
  - (d) present the land information plan to the council for review and endorsement;
  - (e) establish, by administrative rule, an application process and a granting process that must be used to distribute funds in the account. The granting process must give preference to interagency or intergovernmental grant requests whenever multiple state agencies, local governments or agencies, or Indian tribal governments or tribal entities have partnered together to meet a requirement of the land information plan.
  - (f) review all grant applications from state agencies, local governments or agencies, and Indian tribal governments or tribal entities for the purpose of implementing the land information plan;
  - (g) monitor the use of grant funds distributed to a state agency, a local government or agency, or an Indian tribal government or tribal entity or to any combination of state, local, and Indian tribal governments or entities to ensure that the use of the funds complies with the purposes of this part;
  - (h) coordinate the development of geographic information system standards for creating land information;
  - (i) serve as the primary point of contact for national, regional, state, and other GIS coordinating groups for the purpose of channeling issues and projects to the appropriate individual, organization, agency, or other entity;
  - (j) provide administrative and staff support to the council, including paying the expenses of the council;
  - (k) annually prepare a budget to carry out the state library's responsibilities described in this section;
  - (l) report to the governor and the legislature, as provided for in [5-11-210](#), on the progress made in the ongoing collection, maintenance, standardization, and dissemination of land information; and
  - (m) implement the conservation easement information requirements as provided for in [76-6-212](#).
- (2) To fulfill the responsibilities described in subsection (1), the state library or any recipient of funds granted pursuant to this part may contract with a public or private entity.

**History:** En. Sec. 4, Ch. 135, L. 2005; amd. Sec. 4, Ch. 352, L. 2007; amd. Sec. 5, Ch. 175, L. 2013.

Pasted from <<http://leg.mt.gov/bills/mca/90/1/90-1-404.htm>>

# MSL and Montana Spatial Data Infrastructure

Monday, January 05, 2015  
9:36 AM

## Structures and Addressing



The Structures & Address Framework is a statewide database of structure and address points obtained from local, state, federal, and private data providers.

Structures and address data are used for everything from natural resource planning to recovery from natural disasters including floods, wildfires and earthquakes. Furthermore, address data are essential for delivery of government and private services such as the dispatch of emergency services and postal and package delivery.

Pasted from <[http://geoinfo.msl.mt.gov/Home/msdi/structures\\_and\\_addresses.aspx](http://geoinfo.msl.mt.gov/Home/msdi/structures_and_addresses.aspx)>

## Transportation



The Transportation Theme model contains multi-jurisdictional roads, ramps, bridges and trails features, and supporting tables encompassing Montana. The model is managed through a federated approach, where data from tribal, federal, state, local and private providers is contributed, standardized and then integrated into the model. Using data from these sources assures the best-possible and best-available coverage across the entire state. The layer is continually maturing providing support for a variety of applications.

Pasted from <<http://geoinfo.msl.mt.gov/home/msdi/transportation>>

## Administrative Boundaries



Administrative Boundaries are legally documented and attributed jurisdictional boundaries. These boundaries define the rights and interests on the land. Ensuring that boundaries, any boundary in the state of Montana, are correctly recorded and drawn is essential for several reasons:

- Legal—establishing well-defined, consistent boundaries minimizes legal irregularities.
- Equitable collection/distribution of funds—fees, taxes, or grants are associated with a defined area (e.g., fire

district).

- Equitable distribution of benefits—boundary lines define benefit areas (e.g., public water/sewer districts).
- Mapping—accurate boundary lines are used in creating paper maps, delivering online spatial-based services, and in public policy decision making.
- “Bad” geography—many new districts rely on existing, erroneous district boundary lines, thus producing a domino effect of inaccurate information.
- Public knowledge—public information on district boundary legal descriptions and their corresponding maps should be correct and dependable.

Pasted from <[http://geoinfo.msl.mt.gov/Home/msdi/administrative\\_boundaries.aspx](http://geoinfo.msl.mt.gov/Home/msdi/administrative_boundaries.aspx)>

## Cadastral Data (Land Ownership)



Cadastral data is the information about rights and interest in land. The data may also be known as real estate data, parcel information, or tax parcel information. The Montana Cadastral Framework data consists of tax parcels defined by the Montana Department of Revenue and built primarily upon CadNSDI Montana – a digital representation of the Public Land Survey System (PLSS) created from survey records and mapping control information. The Cadastral Framework may also be vertically integrated with other CadNSDI-based sources of data such as Public Lands, Conservation Easements, Administrative Boundaries (county and state boundaries, fire districts, etc.) and Montana State Trust Lands. [ESRI recognized Montana as the first state in the nation to create a GIS-based statewide Cadastral database.](#)

Pasted from <<http://geoinfo.msl.mt.gov/home/msdi/cadastral>>

## Orthoimagery



Digital orthoimagery are georeferenced images of the Earth’s surface. Displacement of objects has been removed for sensor distortions and orientation and for terrain relief. Many geographic features, including those that are part of the Framework, can be interpreted and compiled from an orthoimage. Orthoimages can also serve as a backdrop to reference the results of an application to the landscape.

Pasted from <<http://geoinfo.msl.mt.gov/home/msdi/orthoimagery>>

# ESInet Background

Thursday, January 08, 2015  
8:04 AM

"The computer industry developed a method to send voice from computers to other computers using a technology called Voice over Internet Protocol (VoIP). The term "internet" in this title does not mean it has to use the internet as we know it. IP is really a group of protocols used by computers. These protocols are a standard that can be used to integrate various types of equipment.

This technology is not restricted to the internet, but reflects the use of a protocol suite developed for the internet."

"NENA started several working groups that developed a future path plan for 9-1-1 PSAPs and networks. This plan looked at the various sources of information that can be used and how it can be utilized in the PSAP. The objectives of the future path plan are:

- Any 9-1-1 call originator, voice or text, must be able to access the nation's 9-1-1 systems and have their call delivered to the appropriate answering point, with caller location identification.
- The answering point must receive and be able to manage the data, and be able to transfer the 9-1-1 call to a variety of emergency service points, and those entities must have access to the call information for call and incident handling.
- In present and future applications of all technologies used for 9-1-1 call and data delivery, maintain the same level or improve on the reliability and service characteristics inherent in past 9-1-1 systems design."

Page 8, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

"NENA defines an ESInet as 'an IP-based inter-network (network of networks) shared by all agencies which may be involved in any emergency.'"

Page 18, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

"An ESInet is an advanced network in which the delivery of 9-1-1 calls are routed directly to the appropriate PSAP via a managed, uniform, dedicated, statewide digital network utilizing standardized components and IP technology.

An ESInet supports the direction in which the public safety industry is heading and provides a solid technical foundation for PSAPs of the future. Most public safety industry leaders, both on the PSAP and vendor sides, agree that 9-1-1 is moving toward IP-enabled networks similar in concept to the LANs found in most offices today. It is generally accepted by most in the industry that the amount of data sent to PSAPs today is considerably less than the amount that is sent to PSAPs in the future. While it is difficult to predict the future, services such as telematics, (Automatic Crash Notification (ACN)), Geographic Information Systems (GIS) data, and several types of data offer good examples of the increased data flow that is likely and could be easily supported by an appropriately sized NG9-1-1 system solution.

Page 10, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

"The Statewide ESInet will enable call access, transfers and backups among and between PSAPs within South Dakota, and potentially, across the region and nation. Additionally, the ESInet will potentially provide access to other emergency services organizations such as poison control centers, telematics service providers such as OnStar, alarm monitoring companies and Federal agencies such as the Federal Emergency Management Agency (FEMA). Thus, it is an interconnected and interoperable system of local, regional and national emergency services networks.

An ESInet is designed to enable access to public emergency services, when the technology is fully developed and commercially available by any personal communication device regardless of mobility and/or technology. This includes emergency calls using text messages, instant messages, voice and video from handheld devices, laptop and desktop computers and wireless and wireline phones. An ESInet will have the capability to pass information to enhance the response, such as an image of the scene of an accident. It would also be capable of accessing information designed to facilitate emergency services such as a caller's medical records or the building plans of the caller's location. An ESInet will provide the connectivity to enable the PSAPs and the general public the ability to receive up-to-date information, warnings, and/or instructions on large-scale events."

Page 10, South Dakota State 9-1-1 Master Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

# Why is Statewide Coordination Needed

Tuesday, December 23, 2014  
2:33 PM

"Experience in deploying 9-1-1 initiatives across the county has revealed one fundamental lesson - states with central coordination deploy 9-1-1 enhancements faster than those that do not."

Page 29, North Dakota NG9-1-1 Master Plan

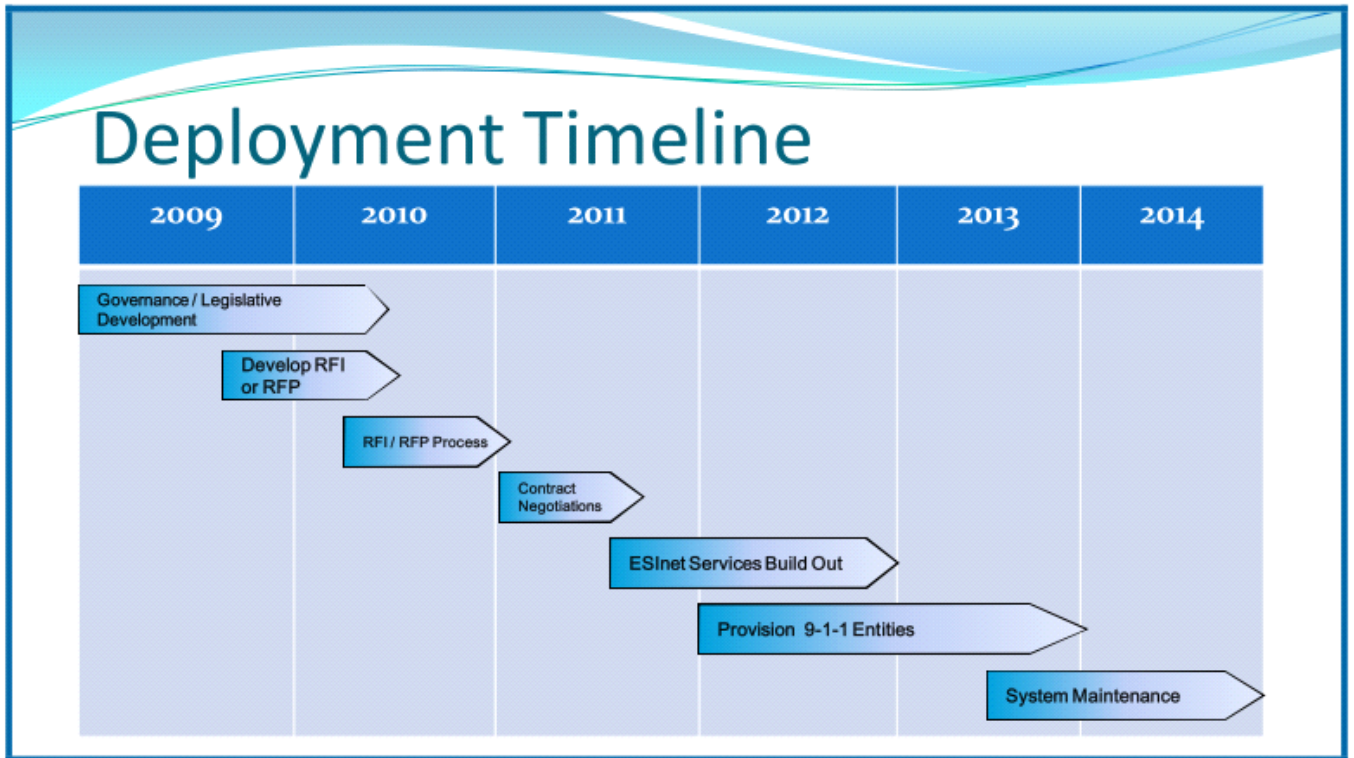
[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

"One model that may work well is a committee or council similar in nature to the statewide interoperability committee."

Page 30, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

## Time Line



Screen clipping taken: 12/31/2014 9:30 AM

### "6.5.1 Governance/Legislative Development Phase

During this phase, the state should develop a governance structure and assign a statewide coordination point. This begins the process of developing the specific needs of the 9-1-1 entities within the state. This is an important step in the process, as there needs to be input from the 9-1-1 entities as to the specific functions of the new system they require. This also allows for the integration of the various 9-1-1 entities that may have worked independently in the past to begin to work in a coordinated environment.

The coordination with the various stakeholders allows time to educate the 9-1-1 stakeholders on NG9-1-1.



This education assists to develop the functional requirements of the various processes that are needed to deploy this technology. By gathering information from all of the stakeholders up front, some issues during deployment can be eliminated.

Also during this phase, there needs to be a review and possible update of the legislative and regulatory environment. The management, funding, and maintenance of the NG9-1-1 system needs to be reviewed."

Page 32-33, North Dakota NG9-1-1 Master Plan

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

"The North Dakota Legislature established the Emergency Services Communications Coordinating Committee (ESCCC) to "coordinate plans for implementing" NG9-1-1. This Committee is also charged with recommending "changes to the operating standards for emergency services communications", and "developing guidelines regarding the allowable uses of the fee revenue" collected for 9-1-1 systems."

[http://www.ndaco.org/programs\\_and\\_services/911/](http://www.ndaco.org/programs_and_services/911/)

"A number of different task forces, meetings and studies over the years have culminated in the 2008 creation of the South Dakota 9-1-1 Coordination Board.

The board, which is appointed by the Governor, is comprised of eleven members from cities, counties, professional organizations, associations and service providers. One member is from the Department of Public Safety. All members are appointed to staggered three year terms. The board employs a 9-1-1 coordinator to assist with the coordination of the statewide 9-1-1 system.

Specifically, the South Dakota 9-1-1 Coordination Board is legislatively tasked with the following duties:

- Evaluate all current public safety answering points and systems for their capability to administer systems.
- Develop plans for the implementation for a uniform statewide 9-1-1 system covering the state.
- Monitor the number and location of public safety answering points or systems and the use of 9-1-1 emergency surcharge funds in their administrative and operational budgets.
- Develop criteria and minimum standards for operating and financing public safety answering points or systems.
- Develop criteria for the eligibility and amount of reimbursement of recurring and nonrecurring costs of public safety answering points or systems.
- Develop criteria for the implementation of performance audits of the use of 9-1-1 fees utilized in the operation of the 9-1-1 system.
- Report annually to the Governor and Legislature about the operations and findings of the board and any recommendations for changes to 9-1-1 service in the state.

The 9-1-1 Coordinator also acts as a conduit from the board to those involved across the state in the day-to-day activities of operating a public safety answering point."

[http://dps.sd.gov/sd\\_911/911\\_history.aspx](http://dps.sd.gov/sd_911/911_history.aspx)

"All system changes that occurred at the local level over the past 20 years took place with virtually no state level coordination. The lack of state coordination is primarily why the modest improvements that did occur, took 20 years to achieve."

Page 1, South Dakota State 9-1-1 Master Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

# Master Plans

Wednesday, December 31, 2014  
9:48 AM

## MAINE

The Maine ESCB NG9-1-1 system should be developed using open standards that will allow for interoperability with call origination systems, PSAPs, and other NG9-1-1 systems. These open standards are being developed by several SDOs. Two primary SDOs with respect to open NG9-1-1 standards are the National Emergency Number Association (NENA) and the Internet Engineering Task Force (IETF).

Page 12 - Maine Next Generation 9-1-1 Plan

<http://www.maine911.com/psap/Publications/Maine%20NG911%20Plan2011!.pdf>

## MICHIGAN

[http://www.michigan.gov/documents/msp/State\\_of\\_MI\\_911\\_Plan\\_06232009\\_286537\\_7.pdf](http://www.michigan.gov/documents/msp/State_of_MI_911_Plan_06232009_286537_7.pdf)

## NORTH DAKOTA

[http://www.ndaco.org/image/cache/NextGen\\_911\\_Master\\_Plan\\_-\\_Kimball.pdf](http://www.ndaco.org/image/cache/NextGen_911_Master_Plan_-_Kimball.pdf)

## IDAHO

<http://www.bhs.idaho.gov/Pages/ECC/Docs/State%20911%20Plan.pdf>

## NEBRASKA

[http://www.psc.nebraska.gov/ntips/pdf/e911/Next\\_Generation/Nebraska\\_NG911%20Report\\_Initial%20%20Report\\_30JAN2014.pdf](http://www.psc.nebraska.gov/ntips/pdf/e911/Next_Generation/Nebraska_NG911%20Report_Initial%20%20Report_30JAN2014.pdf)

## WASHINGTON

Washington State Next Generation 911 Plan

<https://soh.sp.ohio.gov/sites/ESINET/Shared%20Documents/Support%20Documents/State%20NG9-1-1%20Plans/Washington%20NG911%20Plan%20%28final%20adopted%29%20101609%20%2811%29.pdf>

## SOUTH DAKOTA

"The purpose of the State 9-1-1 Master Plan is to communicate the vision of a South Dakota NG9-1-1 System to stakeholders so that they may be actively engaged in its development and deployment. The State 9-1-1 Coordination Board's State 9-1-1 Master Plan presents a South Dakota perspective of the system's functionality, management, operations and governance. Additionally, a high level transition plan is provided in section 8.1 of this plan to chart the course of the Board's initiatives and activities on this extensive, multi-year effort. The plan will also address key current 9-1-1 related financial, legislative, operational and technical issues.

Additionally, the purpose of this document is to ensure the successful transition of all South Dakota PSAPs from the current 9-1-1 system to the South Dakota NG91-1 System and the management and operation of the system for optimal security and efficiency. To accomplish these goals, the Master Plan will:

- Identify the functional requirements for a statewide host remote 9-1-1 call answering system, the Emergency Services Internet Protocol Network (ESInet) that will be needed to interconnect the

host and

remote sites, and the data required to support the NG9-1-1 system

- Identify related financial, legislative, operational and technical issues and define the governance and system management necessary for optimal security, scalability, functionality and efficiency of the system."

Page 3, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

#### "7.1 Transition Plan

The South Dakota NG9-1-1 environment will differ considerably from the current 9-1-1 environment.

The changes

are not limited to only standards and technology. They include the governance, management and operation of the

system and the delivery of services. The changes affect the entire 9-1-1 community, including the general public and

other emergency services. The planning and transition to NG9-1-1 will be an extensive, multi-year effort.

Conceptually, transition will begin with acquisition of the Statewide GIS data that will support critical NG9-1-1 core

functions, build-out of IP networks to and between host sites and the PSAPs, installation of an IP-based host remote 9-1-1 call answering system to serve all PSAPs in the State, followed by implementation of the

applications that provide next generation functionality."

Page 26, South Dakota State 9-1-1 Mater Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

# News stories

Wednesday, December 31, 2014  
3:33 PM

From Idaho/Washington:

<http://www.spokesman.com/stories/2014/oct/24/next-generation-911-will-allow-texting-with/>

Connecticut and Kansas:

<http://www.emergencymgmt.com/next-gen-911/Next-Gen-911-Two-States-Two-Approaches.html>

Ohio:

<http://www.cincinnati.com/story/news/2014/10/26/state-looks-overhaul-system/17984767/>

North Dakota:

<http://www.ems1.com/ems-products/software/articles/2045027-Statewide-Next-Gen-911-accelerates-response-times/>

South Dakota:

<http://www.keloland.com/newsdetail.cfm/state-upgrading-911-system/?id=174205>

<http://urgentcomm.com/ng-911/ng-911-project-tcs-will-bring-unprecedented-connectivity-south-dakota-911-leader-says?page=1>

# Costs and Funding

Monday, January 05, 2015  
9:21 AM

## **OREGON - Next Generation 9-1-1 Cost Analysis**

Prepared by L. R. Kimball in 2011 for the Oregon Office of Emergency Management

[http://www.oregon.gov/OMD/OEM/or911/docs/kimball\\_phase\\_1\\_oregon\\_ng911\\_cost\\_analysis.pdf](http://www.oregon.gov/OMD/OEM/or911/docs/kimball_phase_1_oregon_ng911_cost_analysis.pdf)

## **Funding 9-1-1 Into the Next Generation**

Simply modifying the current surcharge model to account for a changing landscape that includes not only an increased use of wireless and IP-based services, but also a corresponding drop in traditional wireline phone service, might be an option if the goal was simply to maintain the status quo. However, that is far from the goal that the public safety industry wishes to achieve. In order to meet the public's expectation of ubiquitous 9-1-1 service for all technologies, there is simply no choice other than to migrate from the current limited 9-1-1 system to a fully IP-enabled NG9-1-1 and emergency communications system capable of responding to a 9-1-1 communication "anytime, anywhere, from any device" and with interoperable voice, data and video communications among all emergency response entities. For more on the NG9-1-1 system, view the Findings and Recommendations of the 2005 NENA NG E9-1-1 Program, available at [www.nena.org](http://www.nena.org).

A 2007 Study by the National Emergency Numbering Association (NENA)

<http://c.ymcdn.com/sites/www.nena.org/resource/resmgr/NGPP/NGFundingReport.pdf>

# Standards

Monday, January 05, 2015  
1:41 PM

## **NENA STANDARDS**

The National Emergency Number Association has worked on, or is working on a variety of Standards related to NG9-1-1. The Montana State Library's Geographic Information Program is a member of NENA and participates in the Site/Structure Address Point Workgroup, which is drafting best practices for address point layer development. For links to this and other NENA NG9-1-1 standards please go to this page [http://www.nena.org/?NG911\\_Project](http://www.nena.org/?NG911_Project) and scroll down toward the bottom of the page.

## **LEGISLATIVE STANDARDS**

However, the current laws and regulations in most States do not effectively enable the implementation of new technologies, or allow the level of coordination and partnerships among government and public safety stakeholders, service and equipment providers, 9-1-1 public safety answering points, and 9-1-1 authorities that are necessary to implement IP-enabled 9-1-1 systems. The deployment of Next Generation 9-1-1 will require increased coordination and partnerships among these groups. Many existing laws, regulations, and tariffs specifically reference older technologies or system capabilities and may inadvertently inhibit the migration to IP-enabled 9-1-1. Many 9-1-1 State entities have very limited and specific authority to operate or oversee the 9-1-1 system within the State. Legislation in many States may need to be reexamined, and in many cases, modified, to effectively support NG9-1-1 deployment.

<http://www.nhtsa.gov/staticfiles/nti/pdf/811688.pdf>

Guidelines for State NG9-1-1 Legislative Language

“To actually implement an NG9-1-1 system requires effective overall policies, laws, and regulations that facilitate and fully support all aspects of NG9-1-1”  
(National Emergency Number Association NG Partner Program, 2010)

# Potential Legislative Actions

Tuesday, December 23, 2014  
2:33 PM

## Observation

It is the observation of the Montana State Library's Geographic Information Program that Montana is behind many other states in planning for NG9-1-1. We are not experts in all aspects of NG9-1-1 but we are becoming very well informed on the GIS data that will be required. A glance at the other state's efforts pages indicate that many states have NG9-1-1 plans, and some states are actively implementing NG9-1-1. We could have put links to several other state plans up but didn't want to overwhelm readers. Our goal is to raise awareness on the need to begin planning for NG9-1-1 and inform the public safety communications and GIS communities on the role GIS will play in NG9-1-1 and need to begin preparing their data.

## Legislation in Montana:

There is currently a draft bill (LC1823/HJ7) before the Montana Legislature to form a committee to begin planning for NG9-1-1. The draft bill requests the committee to:

- (1) evaluate how the state, local governments, and emergency responders can form a partnership to begin planning for next-generation 9-1-1 in Montana;
- (2) identify what legislative changes need to be made to implement next-generation 9-1-1 in Montana;
- (3) identify funding requirements and potential funding sources needed to implement next-generation 9-1-1 in Montana;
- (4) develop a plan for implementing a standards-based next-generation 9-1-1 system in Montana; and
- (5) propose legislation for consideration by the 65th Legislature to enable implementation of 7 next-generation 9-1-1 in Montana.

[http://laws.leg.mt.gov/legprd/LAW0210W\\$BSIV.ActionQuery?P\\_BILL\\_DFT\\_NO5=LC1823&Z\\_ACTION=Find&P\\_SESS=20151](http://laws.leg.mt.gov/legprd/LAW0210W$BSIV.ActionQuery?P_BILL_DFT_NO5=LC1823&Z_ACTION=Find&P_SESS=20151)

## Example legislation from other states:

Example from South Dakota of removing references to outdated technology in their statutes:

**"Goal One:** South Dakota will have a statutory environment that does not impede but rather facilitates the implementation of and transition to NG9-1-1.

- **Objective 1.1:** The Board will plan for another review of the 9-1-1 regulatory framework for new roadblocks after NG9-1-1 system specifications and requirements are defined and decisions are finalized.
- **Objective 1.2:** The Board will work with the legislature to expand its statutory authority to include the authority to operate and manage a State-level ESInet.
- **Objective 1.3:** The Board will work with the legislature to legislate a broad definition of "call" that includes other types of communications, in addition to voice calls, that could be used to request 9-1-1 service.
- **Objective 1.4:** The Board will work with the legislature to combine the relevant portions of the definitions for Basic 911, Enhanced 911 and 911 emergency reporting system or 911 system to establish a strong and unified definition of 911 that covers all potential technologies and eliminates the existing technology specific definitions that will not require individual statutory treatment in the NG9-1-1 environment.
- **Objective 1.5:** The Board will work with the legislature to amend the statute to remove the definitions for "Interconnected Voice over Internet Protocol (VoIP)" and "Wireless telecommunications service"<sup>8</sup>, as well as the several references to wireless telecommunications service and "Interconnected Voice over Internet Protocol service" that occur throughout the statute<sup>9</sup> since the existing definition for "Telecommunications service" covers any technology capable of accessing 9-1-1.

Page 18, South Dakota State 9-1-1 Master Plan

[http://dps.sd.gov/sd\\_911/documents/RPT130815skwSD911MasterPlan.pdf](http://dps.sd.gov/sd_911/documents/RPT130815skwSD911MasterPlan.pdf)

A bill currently before the Wyoming Legislature:  
<http://legisweb.state.wy.us/2015/Introduced/HB0105.pdf>