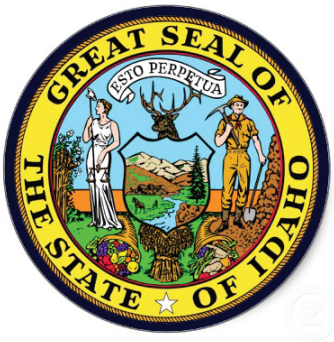
Idaho Enhanced/ Next Generation 911 Plan



State of Idaho
Idaho Emergency Communications Commission

Adopted May 2013 • Version 1

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF FIGURES

EXECUTIVE SUMMARY

L.R. Kimball together with Clint Berry, Consultant to the Idaho (State) Emergency Communications Commission (IECC), respectfully submits this Draft Enhanced/Next Generation 9-1-1 Plan to the IECC.

Idaho's current E9-1-1 network was developed and implemented around landline technology more than 40 years ago and was not designed to facilitate the transmission of text messages and data images such as pictures and video. Consumers are driving the telecommunications landscape and Public Safety Answering Points (PSAPs) need to be able to meet expectations and accommodate a wider range of communication methods. In addition to receiving cellular and legacy 9-1-1 wireline calls, the public expects PSAPs to handle instant messaging, text messages, telematics (automatic crash notification) and live video feeds. Today, the PSAPs in Idaho (State) do not support these applications; therefore there is a need to transition Idaho's current Enhanced 9-1-1 (E9-1-1) network into the Next Generation of 9-1-1 (NG9-1-1).

A communications shift is also occurring among the hearing and speech impaired community. Because of the nearly obsolete Telecommunication Device for the Deaf/Teletype (TDD/TTY) equipment and lack of portability, these individuals have embraced new technologies in their everyday lives, such as wireless phones and smart devices that bring portability and ease of use to these individuals. Unfortunately, they are unable to use these devices to make a text-based 9-1-1 call because Idaho's legacy analog 9-1-1 network cannot accept this kind of technology.

While the current 9-1-1 system has served the State well for decades, consumers and new technologies are driving Idaho's communications industries to rapidly move to an infrastructure that offers enhanced capabilities and increased capacity. The new infrastructure is being referred to as NG9-1-1 and would utilize an Emergency Services Internet Protocol network (ESInet) to easily interface with the communication methods available today and those communications methods of the future. Next Generation 9-1-1 involves the evolution of E9-1-1 to an all-Internet Protocol (IP)-based emergency communications system.

As Idaho PSAPs consider transitioning to NG9-1-1 systems and the associated ESInet, it's absolutely critical that the system be developed using open standards that interfaces between the PSAP, ESInet and the caller's device. Components of the National Emergency Number Association (NENA) NG9-1-1/ESInet are frequently referred to as the i3 Architecture that defines the ESInet model, functions, interfaces and required services.

This new digital network will drive changes in the PSAP environment and all stakeholders will not only need to address emerging technologies, but public policy concerns as well. Changes in state and federal requirements, funding methods, diverse demographics and jurisdictions will present significant challenges and unique opportunities.

The IECC will promote collaboration between all PSAPs with regard to network governance, procurement and implementation. Idaho's PSAPs will need to consider and plan for training and retaining skilled employees in the 9-1-1 centers of the future.

Idaho's current E9-1-1 network is comprised of many telephone company networks designed and installed more than 40 years ago, and remains largely unchanged today. Most of the State's 46 PSAP are directly connected to a telephone company central switch that routes calls to the appropriate PSAP.

Not only do consumers expect 9-1-1 centers to keep pace with new technologies, they also expect the same level of service in rural Idaho that they receive in urban parts of the State. While Idaho's urban areas tend to have greater resources, the State has been able to incrementally bridge the technology gap with the implementation of the Dedicated Enhanced Emergency Communications Grant Fund Program. House Bill 80 of 2013 was passed and removes the sunset clause in Section 31-4819 that would have ended the program in 2014.

It will be important for the IECC to consider creating new staff positions to support the increased tasks and planning involved in State's transition to NG9-1-1. The creation of a NG9-1-1 Program Manager position and a NG9-1-1 Program Administrative Assistant position will likely be required to manage and provide assistance to the IECC with the implementation and maintenance of the NG9-1-1 network and program across Idaho.

This State of Idaho Enhanced/Next Generation 9-1-1 Plan (Plan) identifies the overarching steps and tasks necessary to assess, plan, design, test, implement and maintain a comprehensive NG9-1-1 System in Idaho.

This Plan utilizes a comprehensive methodology for the implementation of NG9-1-1 in Idaho. The following phases are outlined in this plan:

- Initiation
- Assessment and analysis
- Requirements, design and planning
- Proof of Concept
- Implementation
- Maintenance and management

In each phase there are studies, reports, requirements, designs and plans related to the following tasking areas:

- Regulatory, legislative and funding
- Governance
- Technology
- Operations
- Security

This document is designed to be an actionable, sustainable, tactically-focused plan for a Statewide NG9-1-1 implementation.

Meeting the challenges and capitalizing on the opportunities will require comprehensive planning. This State of Idaho Plan represents the first step towards the continued excellence in 9-1-1 services today and into the future. The IECC will strive to facilitate a cooperative means for the migration to NG 9-1-1 services in the State. This Plan is intended to be a living document and will enable the State to qualify for future Federal Grant funds. To maintain its relevancy, the IECC and its Program Coordinator, in consultation with 9-1-1 stakeholders, will formally review and update this plan periodically.

1. INTRODUCTION

1.1 Background

1.1.1 Idaho Emergency Communications Commission

The IECC was created by the Idaho Legislature in 2004 pursuant to amendments to the Idaho Emergency Communication Act, Idaho Code § 31-4801 *et seq.* The purpose of the IECC is "to assist cities, counties, ambulance districts and fire districts in the establishment, management, operations and accountability of consolidated emergency communications systems."[1]This purpose and the responsibilities of the Commission as granted by the Idaho Legislature are centered on finding solutions for counties and cities to keep up with technological advances in the area of 9-1-1 and emergency communications for Public Safety purposes.

The IECC is comprised of thirteen members and one ex-officio member. The majority of the members represent various local Statewide governmental associations, interested members of the private sector and the public at large from all regions of the state of Idaho. All members are appointed by the Governor. Two are members by nature of their position: Director of the Idaho State Police or designee and the Adjutant General or designee. The ex-officio member is a representative of the Attorney General's Office.
The following entities are currently represented on the IECC:

- Association of Idaho Cities
- Public at Large
- Idaho State Emergency Medical Services
- Idaho Emergency Medical Services Association
- Idaho Chiefs' of Police Association
- Idaho State Police
- Idaho Association of Counties
- Idaho Sheriff's Association
- Idaho Fire Chiefs Association
- Idaho Prosecuting Attorneys Association
- Traditional Phone Service Industry
- Wireless Phone Industry
- Idaho Bureau of Homeland Security
- Idaho Attorney General's Office

The Mission of the IECC is to, "Enhance Idaho's public health, safety and welfare by assisting emergency communications and response professionals in the establishment, management, operations and accountability of consolidated emergency communications systems."[2]

1 Idaho Emergency Communications Act, Idaho Code § 31-4815(1).
2 http://www.e911.idaho.gov/about.htm

1.1.1.1 Idaho Emergency Communication Commission Legislative Authority

Since the original enactment of the Idaho Emergency Communications Act, there is still a need in many Idaho communities to increase the support to Public Safety communications systems. In amendments to the Act in 2004, 2007 and again in 2008, the Legislature found:

- *Since the original enactment of the Emergency Communications Act in 1988, many of Idaho's communities have found that they are lacking in the resources to fully fund emergency communications systems at the local level;*
- *Changes in technology and the rapid growth of communications media have demonstrated that financing such systems solely by a line charge on subscribers to wire line services does not reflect utilization of emergency communications systems by subscribers to wireless and other forms of communications systems;*
- *There is a need to enhance funding for the initiation and enhancement of consolidated emergency communications systems throughout the state;*
- *Utilization of cellular telephones and voice over internet protocol (VoIP) communications to access emergency communications systems has substantially increased citizen access to emergency services while at the same time increasing demands upon the emergency response system;*
- *In order to protect and promote the public health and safety, and to keep pace with advances in telecommunications technology and the various choices of telecommunications technology available to the public, there is a need to plan and develop a statewide coordinated policy and program to ensure that Enhanced 9-1-1 services are available to all citizens of the state and in all areas of the state.*
- *The need to implement planning for the migration to the Next Generation 9-1-1.*[3]

With these directives from the Legislature, the Commission has continued to strive to fulfill its purpose and responsibilities as prescribed in Idaho Code § 31-4816 to:

(1) Determine the status and operability of consolidated emergency communications systems Statewide
(2) Determine the needs for the upgrade of consolidated emergency communications systems
(3) Determine the costs for the upgrades
(4) Recommend guidelines and standards for operation of consolidated emergency communications systems
(5) Recommend funding mechanisms for future implementation of upgrades
(6) Serve as a conduit for the future allocation of federal grant funds to support the delivery of consolidated emergency communications systems
(7) Report annually to the legislature of the State of Idaho on the planned expenditures for the next fiscal year, the collected revenues and moneys disbursed from the fund and the programs or projects in progress, completed or anticipated
(8) Enter into contracts with experts, agents, employees or consultants as may be necessary
(9) Promulgate rules…to carry out the purposes of the Commission's duties.

[3] Emergency Communications Act, Idaho Code § 31-4801(a).

1.1.1.2 Idaho Emergency Communication Commission Program Coordinator

The IECC is currently budgeted for one employee; an E9-1-1 Program Coordinator (Coordinator). The Coordinator assists the IECC in accomplishing their stated mission, purpose and responsibilities. It is the responsibility of the Coordinator to manage all administrative tasks of the IECC including ensuring its meetings are publicized and accessible to the public in accordance with the Idaho's open meeting statutes. The Coordinator administers the IECC Dedicated Enhanced Emergency Communications Grant Fund, as well as the distribution of grants and associated audits.

Additionally, the Coordinator represents the State of Idaho's interest through membership and active participation in professional organizations including the National Association of State 9-1-1 Administrators (NASNA), NENA, and the Association of Public-Safety Communications Officials International (APCO). The Coordinator serves as the primary contact point for the IECC to the Federal Communications Commission (FCC). In partnership with PSAP Administrators the Coordinator plays an important role in the development, implementation and evaluation of E9-1-1 services and technologies. The Coordinator serves as single point of contact for service providers and vendors of E9-1-1 equipment in the State.

With the implementation of the Dedicated Enhanced Emergency Communications Grant Fund Program, the Coordinator's responsibilities increased significantly. The position is now strained to keep up with the required administrative duties in addition to grant evaluation, awards and subsequent assessments. The Coordinator's responsibilities will increase substantially should the State move toward the implementation of a NG9-1-1 system throughout the state. The addition of new resources such as a NG9-1-1 Program Manager and an E9-1-1 Program Administrative Assistant would provide appropriate assistance to the Coordinator and help ease the transition and maintenance of a NG9-1-1 system.

1.1.1.3 Idaho Emergency Communication Commission Public Safety Answering Point Standards Committee

After the IECC was formed and a Coordinator was hired, the IECC performed a PSAP assessment of the status of all PSAPs in Idaho. During that assessment it was determined there was a need to look at a way to assist PSAPs with the training of personnel. The purpose was not for the IECC to impose standards, but to facilitate communication between representatives of individual PSAPs to look at the issues they face on a day-to-day basis and to assist each other.

The IECC formed the PSAP Standards Committee to provide a forum for issues facing PSAPs and dispatchers and develop standardized training throughout Idaho. The IECC assists the Committee with meeting expenses and coordination and the counties/cities provide the personnel staffing at their expense.

The PSAP Standards Committee is comprised of PSAP employees from across the state. The Committee identified three projects that they wanted to accomplish. These projects are as follows:

- Establish standard entry-level training for dispatchers to meet Idaho Peace Officers Standards Training (POST) guidelines for certification for use by all PSAPs. This training is available in workbook format and on compact disc as a result of this project.

- Prepare seminars for PSAP development for emergency services dispatchers that cover a variety of topics ranging from basic dispatch skills to intermediate and advanced technologies.
- Establish a community awareness and public education campaign centered on the importance of the role of the 9-1-1 dispatcher and the 9-1-1 center.

1.1.1.4 The Idaho Emergency Communication Commission as a Resource

The IECC uses its exclusive position as a State of Idaho governmental entity to provide a Statewide perspective on the range of issues facing the emergency communications community. This position enables the IECC to support and be a resource for PSAPs to address issues.

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2. CURRENT 9-1-1 ENVIRONMENT

2.1 9-1-1 Funding

Funding of Basic 9-1-1 and wireless E9-1-1 is provided through an assessment of a fee on subscribers of local landline and wireless access in addition to interconnected VoIP service lines.

The emergency communications fee cannot exceed $1.00 per month per access or interconnected VoIP service line. The fee is limited in its use to finance the initiation, maintenance, operation, enhancement and governance of a consolidated emergency communications system and provides for the reimbursement of telecommunications providers for implementing enhanced consolidated emergency systems. All emergency communications fees collected and expended are required to be audited by an independent, third party auditor.[4]

Idaho's PSAPs are permitted to use the 9-1-1 fees to pay for the lease, purchase or maintenance of emergency communications equipment for basic and enhanced consolidated emergency systems. This includes necessary computer hardware, software, database provisioning and training. Only those salaries that are directly related to enhanced consolidated emergency systems are eligible. Also eligible are costs of establishing enhanced consolidated emergency systems, managing, maintaining and operating hardware and software applications. Agreed-to reimbursement costs of telecommunications providers related to the operation of enhanced consolidated emergency systems are also allowable.[5]

All other expenditures necessary to operate enhanced consolidated emergency systems and all other safety or law enforcement functions are the responsibility of local governing bodies.[6]

In May 2012 the IECC conducted a comprehensive review of the Emergency Communications Act concerning the use of emergency communications fees and determined the following items are considered part of the overall consolidated emergency communications system and therefore can be funded by the fees collected and remitted to the county:

- Telecommunications network charges related to 9-1-1 call taking—this would include 9-1-1 trunks, lines or circuits and frame relay or broadband circuits to connect to the county or city PSAP for the handling of Basic, Enhanced and future Next Generation 9-1-1 technology related purposes. It also includes circuits needed for back up and redundancy.
- Telephone, mapping and voice recording system hardware—computer terminals and servers associated with each hardware system, computer monitors/screens and printers, mobile data terminals (MDTs), dispatch phones, headsets and charging systems including uninterruptible power supply (UPS) and backup generators typically used to protect computers and telecommunication equipment in the event of a power failure.

4 Emergency Communications Act, Idaho Code § 31-4804 (1).
5 Emergency Communications Act, Idaho Code § 31-4804 (5).
6 Ibid.

- Computer software—software residing on the computer terminals and servers in the 9-1-1 center that supports each hardware system such as mapping and call recording/logging, Computer Aided Dispatch (CAD), Emergency Medical Dispatch (EMD) software, language translation services (i.e. Language Line), TDD software/equipment, 9-1-1 telephone system software capable of handling landline and E9-1-1 wireless Phase I and Phase II calls and future NG9-1-1 technologies.
- Computer terminal and server maintenance, and licensing—all annual maintenance agreements related to the 9-1-1 call taking hardware, software and licensing.
- Information Technology Administrator, 9-1-1 Center Manager/Director and Mapping personnel salaries—a portion (based on the amount of time devoted to 9-1-1) of the salary of the person(s) responsible for the maintenance of the 9-1-1 related equipment and salaries associated with center management and mapping personnel. Mapping includes individual(s) responsible for maintaining the Master Street Address Guide (MSAG).
- Training—training of Communications Officers in the use of the equipment, as well as the training in the proper handling of 9-1-1 emergency calls for all Public Safety entities including law enforcement, fire and emergency medical services including EMD.[7]
- This is a partial list and is not intended to supersede the legal advice provided to a specific county or PSAP by their legal counsel on the proper use of funds.

2.1.1 Funding the Idaho Emergency Communication Commission

The IECC is funded by one percent of all of the emergency communications fees collected in the State. The service providers collect the fee in the amount up to $1.00 per wired and wireless line or device from their customers and then remit this to individual counties or 9-1-1 service areas. The counties are then responsible for sending one percent of the fee to the Commission.[8]

2.1.2 Enhanced Emergency Communications Grant Fee

In 2008 the Enhanced Emergency Communications Grant Fee was enacted to help fund E9-1-1, Wireless Phase I and II, and NG9-1-1 throughout Idaho. The enhanced emergency communications grant fee is $0.25 per month per access line including interconnected VoIP service lines.[9] Funds collected from the grant fee are used for grants to eligible entities that are operating consolidated emergency communications systems.[10]

In accordance with Idaho Code, each Board of County Commissioners must pass a resolution to begin collecting the special grant fee.[11] More than 30 of Idaho's 44 counties passed the resolution and are contributing to the grant fund.

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7 IECC Guidelines for Use of Emergency Communications Fees Pursuant to Section 31-4804 (5), Idaho Code, revised May 3, 2012.

8 Emergency Communications Act, Idaho Code § 31-4804 (3-4).

9 Emergency Communications Act, Idaho Code § 31-4819(1).

10 Emergency Communications Act, Idaho Code § 31-4819(b).

11 Emergency Communications Act, Idaho Code § 31-4819(1)(a).

Many of these counties began collecting shortly after the enactment of the grant fee in 2008. Wireless implementation was implemented throughout the State using the grant fee.

To be eligible for grant funds, a county or 9-1-1 service area must be collecting the emergency communications fee in accordance with Idaho Code section 31-4804, in the full amount authorized and must also be collecting the full amount of the enhanced emergency communications grant.[12] A county, city or consolidated emergency communications system remits the grant fee to the Idaho emergency communications fund on a quarterly basis.[13]

The IECC is required to prepare an annual budget that allocates the grant funds to eligible entities and the portion of the funds necessary for the continuous operation of the IECC.[14]

Counties or 9-1-1 service areas that opt to collect the grant fee can retain the full amount of the emergency communications fee established in section Idaho Code section 31-4803. The county or 9-1-1 service area is also exempt from remitting the one percent of emergency communications fees for operation of the IECC.[15]

2.1.3 New Funding Model Needed

The Enhanced Emergency Communications Grant Fee has greatly improved the 9-1-1 landscape in Idaho. House Bill 80 of 2013 was passed and removes the sunset clause in Section 31-4819 that would have ended the program in 2014. The passage of that Bill allows PSAPs in less populated counties to maintain their current systems or migrate to a Statewide NG 9-1-1 network.

The grant program is extremely popular throughout the State and $6.6 million has been granted to the local PSAPs to date. The State has identified counties with a population of 20,000 or less need the grant to continue to provide 9-1-1 service to the county. They are unable to sustain on their own. Additionally, 36 PSAPs in the State would be unable to upgrade their systems without the assistance of the grant program. It would be difficult to perform the necessary upgrades for NG9-1-1 without the grant program in place.

The public expects their local government to keep pace with technology and be able to provide universal access to emergency services regardless of whether they are in an urban or rural area. To meet that expectation, PSAPs will need to replace aging technologies and networks with a NG9-1-1 system. Current models suggest this can be done with a Statewide or regional network model. The current funding model will need to be revised to assist PSAPs with their migration plans towards a Statewide NG9-1-1 network that can provide the best available Public Safety service available throughout Idaho.

The passage of House Bill 193 of 2013 provides for the collection of 9-1-1 fees from purchasers of prepaid wireless service and requires that the 9-1-1 fee be collected by the seller at the point of sale and remitted to the Idaho Tax Commission. While this law moves Idaho forward by collecting 9-1-1 funds from a previously untapped source, the

12 Emergency Communications Act, Idaho Code §31-4819(d-e).
13 Emergency Communications Act, Idaho Code § 31-4819(b).
14 Emergency Communications Act, Idaho Code § 31-4819(b).
15 Emergency Communications Act, Idaho Code § 31-4819(e).

IECC should continue to explore changes to Emergency Communications Act that would account for future technologies, services and devices that are capable of accessing 9-1-1 and establish a new funding model for NG9-1-1. Further discussion of this is found later in this plan.

2.2 Current 9-1-1 Network

2.2.1 Network Overview

The original basic 9-1-1 network was developed by the former AT&T and Bell Laboratories and initially affected the Bell companies. In Idaho, Mountain Bell (formerly known as, U S WEST, Qwest and now CenturyLink) implemented the first system and was based on a circuit-switched or analog technology and remains largely unchanged today. GTE Corporation (formally known as Verizon Landline and now Frontier Communications) implemented a circuit-switched 9-1-1 network in several counties north of the Salmon River.

Wireless implementation throughout the State was one of the upgrades funded by the grant fee. Wireless technology was implemented in two phases. Phase I delivers the wireless 9-1-1 call to the correct PSAP with the caller's phone number. Phase II includes the longitude and latitude (X/Y coordinates) of the caller's location with the Phase I data. In 2008, the year the grant program began, 30 of 46 PSAPs were not wireless capable.

Since the implementation of the grant fund, all of Idaho's 46 PSAPs are either E9-1-1 or are in the process of migrating from Basic 9-1-1 to E9-1-1. After the completion of Fiscal Year 2012 Enhanced Emergency Communications Grant Fee cycle, nearly all of Idaho's PSAPs are E9-1-1 Phase II wireless capable

The maps on the following pages show the status of 9-1-1 service in the State of Idaho in the year 2008 and the status of 9-1-1 currently in 2013. The two maps demonstrate the progress that has been made in 9-1-1 service over the past four years since the Enhanced Emergency Communications Grant Fee program was enacted. A complete progression of the status of 9-1-1 service from 2008 – 2013 can be found in Appendix A.

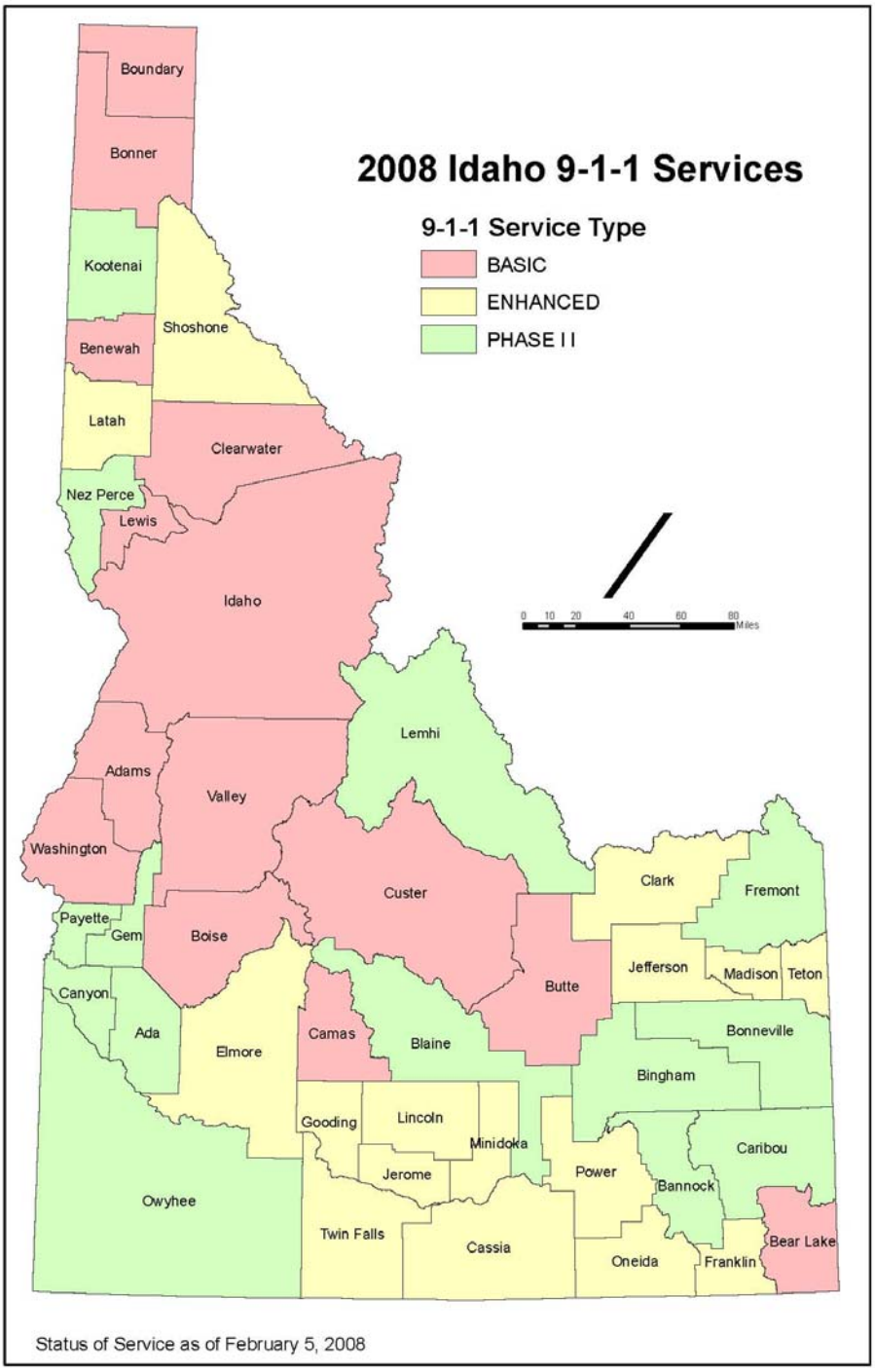

Figure 1—2008 Idaho 9-1-1 Services by County

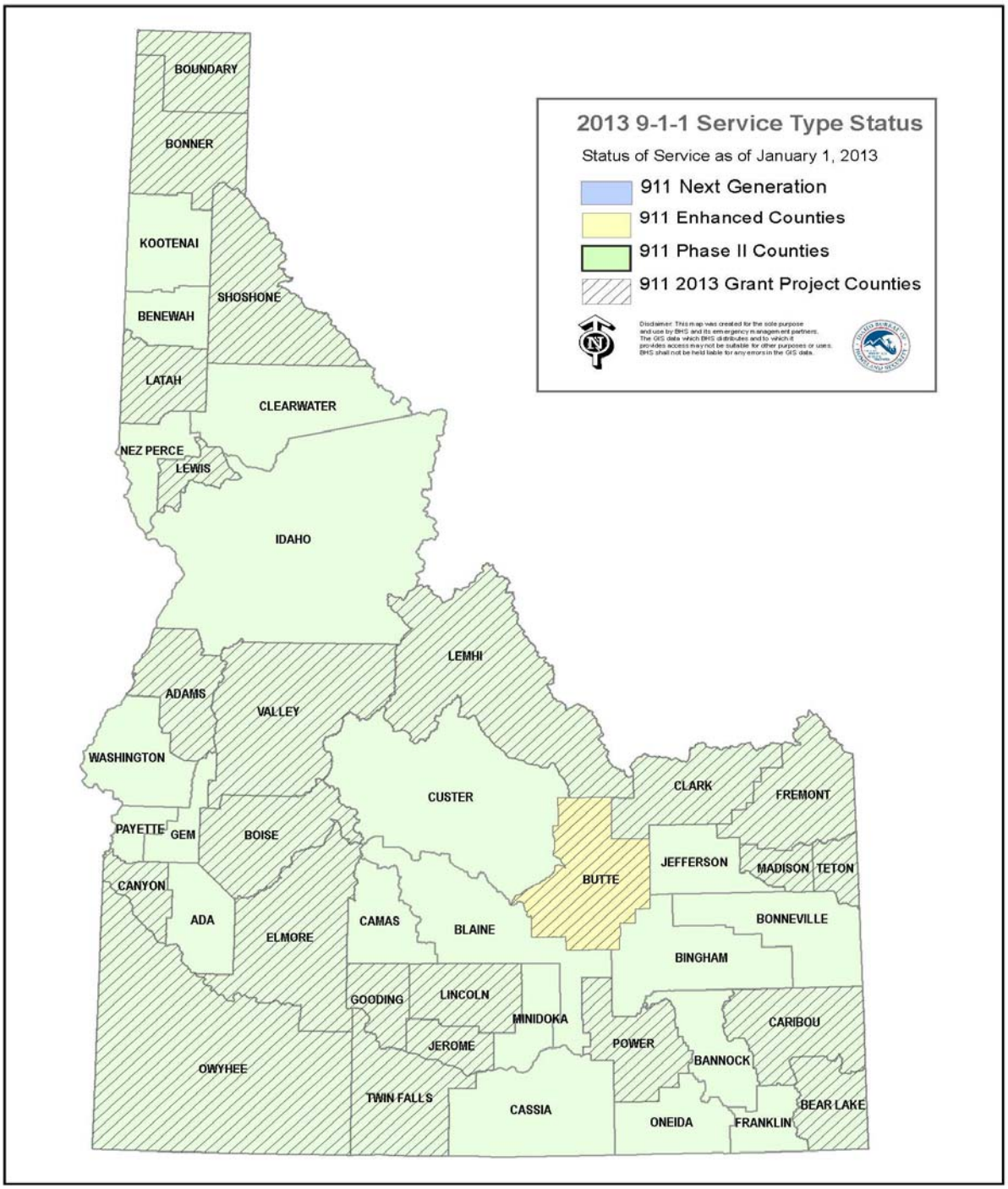

Figure 2—2013 Idaho 9-1-1 Services by County

The current Enhanced 9-1-1 network and associated databases in Idaho are a combination of three separate systems maintained by CenturyLink, Frontier Communications and Farmers Mutual Telephone Company. CenturyLink's partner, Intrado, provides MSAG database services in its territory. Most of the State's 46 PSAPs are directly connected to a telephone company central switch known as a selective router that routes calls to the appropriate PSAP.

Although the network is extremely reliable, it is based on older technologies that are unable to manage emerging communication services and devices and unable to meet the expectations of the citizens of Idaho.

The PSAP service areas and the companies that support them are shown in table 1 below:

Enhanced 9-1-1 Service Areas/Network & Database Providers			
Centurylink		Farmers Mutual Telephone CO	Frontier Communications
Ada County	Canyon County	Payette County	Benewah County
Elmore County	Madison County	Washington County	Bonner County
Adams County	Caribou County	(network provided by Midvale	Boundary County
Franklin County	Minidoka County	Telephone Exchange)	Clearwater County
Bannock County	Cassia County		Latah County
Freemont County	Nez Perce County		Shoshone County
Bear Lake County	City of Lewiston		
Gem County	Owyhee County		
Bingham County	City of Moscow		
Idaho County	(WHITCOM)		
Blaine County	City of Nampa		
Jefferson County	Power County		
Boise County	City of Post Falls		
Kootenai County	SIRCOMM		
Bonneville County	City of Twin Falls		
Lemhi County	Teton County		
Camas County	Custer County		
Lewis County	Valley County		

Table 1—PSAP Service Areas

2.2.2 Equipment Overview

Idaho's PSAPs use an array of manufacturers' CPE including Positron VIPER - Intrado, and Plant/CML – Cassidian, and that equipment is currently installed in twenty-seven locations throughout the State. Fifteen PSAPs use equipment from 911 Inc., - TriTech and Zetron. There is one Emergency Callworks and one microDATA – TeleCommunication Systems (TCS) CPE deployed in Idaho.

3. EMERGENCY SERVICES INTERNET NETWORK IN IDAHO

3.1 NG9-1-1 Overview

Idaho's current E9-1-1 network was developed and implemented around landline technology more than 40 years ago and was not designed to facilitate the transmission of text messages and data images such as pictures and video. The move to integrate these emerging technologies has gained momentum as PSAPs have either replaced, or are in the process of replacing old technology with new equipment capable of managing present-day communications requirements. While the new PSAP equipment may be capable of receiving these new data sets, the network on which they are currently connected cannot support the transmission of the information.

The IECC recognizes that in many of Idaho's PSAPs, the majority of 9-1-1 calls are being made from wireless devices instead of traditional landline telephones tethered to homes and businesses. Also, text messaging has become as common as voice dialing which puts additional pressure on PSAPs to be able to communicate with the 9-1-1 caller. Therefore, Idaho's current E9-1-1 network is in need of a comprehensive overhaul.

To accommodate the technology changes, PSAPs will need to migrate to a NG9-1-1 system that can easily interface with the many different types of communication methods available today and the near future. Next Generation 9-1-1, by definition, is the evolution of Enhanced 9-1-1 to an all-IP-based emergency communications system. The NG9-1-1 system is designed to recognize the device and the type of message (e.g. a voice call, text, photo or video) and route the emergency call in a timely manner to the correct PSAP. Voice calls (including VoIP) text messages or data images will be delivered to the appropriate PSAP using an IP-based network known as an ESInet. The ESInet is a robust secure private IP network with enhanced call routing and delivery functionality that is capable of re-routing calls to other PSAPs connected to the ESInet. It is much like a business enterprise or statewide IP network, such as the Idaho Education Network in place today.

As Idaho PSAPs consider transitioning to a NG9-1-1 system and the associated ESInet, it's absolutely critical that the system be developed using open standards that interfaces between the PSAP, ESInet and the caller's device. Components of the NENA NG9-1-1/ESInet are frequently referred to as the i3 Architecture that defines the ESInet model, functions, interfaces and required services. The i3 Architecture identifies the external interfaces between the PSAP and public access networks, the Internet and legacy wireless and wireline networks. It further describes the systems and databases that intelligently deliver the 9-1-1 call to the appropriate PSAP and supplies important data to assist the telecommunicator. The principle functions of either a State-level or regional ESInet in Idaho needs to consist of the following components:

- An Emergency Services Routing Proxy (ESRP) server properly routes emergency calls using location information and the desired service uniform resource name (URN), to the appropriate local ESInet based upon currently prevailing PSAP status.
- An Emergency Communications Routing Function (ECRF) converts location information (either civic address or geo-coordinates) to provide a Uniform Resource Identifier (URI) that can be used to route an emergency call toward the appropriate PSAP for the callers location. In today's 9-1-1 system, location

information is primarily a fixed address of a home or business stored in an Automatic Location Information (ALI) database. Emergency Communications Routing Function interacts closely with the ESRP function.

- A Policy Routing Function (PRF) refers to the determination of the next hop to which a call is forwarded by an ESRP, which is based on the policy of the PSAP that would normally receive the call.
- A Border Control Function (BCF) provides a layer of security for all calls entering the ESInet. The BCF includes firewall applications to prevent malicious attacks on of the PSAPs connected to the ESInet.
- A Location Information Server (LIS) and Geographic Information System (GIS) enables the PSAP call taker to view locations (such as a street address) and geographic information on a map at their consoles. It is also used to display latitude and longitude coordinates from a wireless 9-1-1 call.

As Idaho's PSAPs plan for NG 9-1-1, it's critical that NENA's recommended i3 Network Architecture is closely followed to ensure interoperability with other ESInets. It is desirable and recognized by NENA to have a single backbone that would eventually be interconnected with a national ESInet to optimize routing of calls between states.

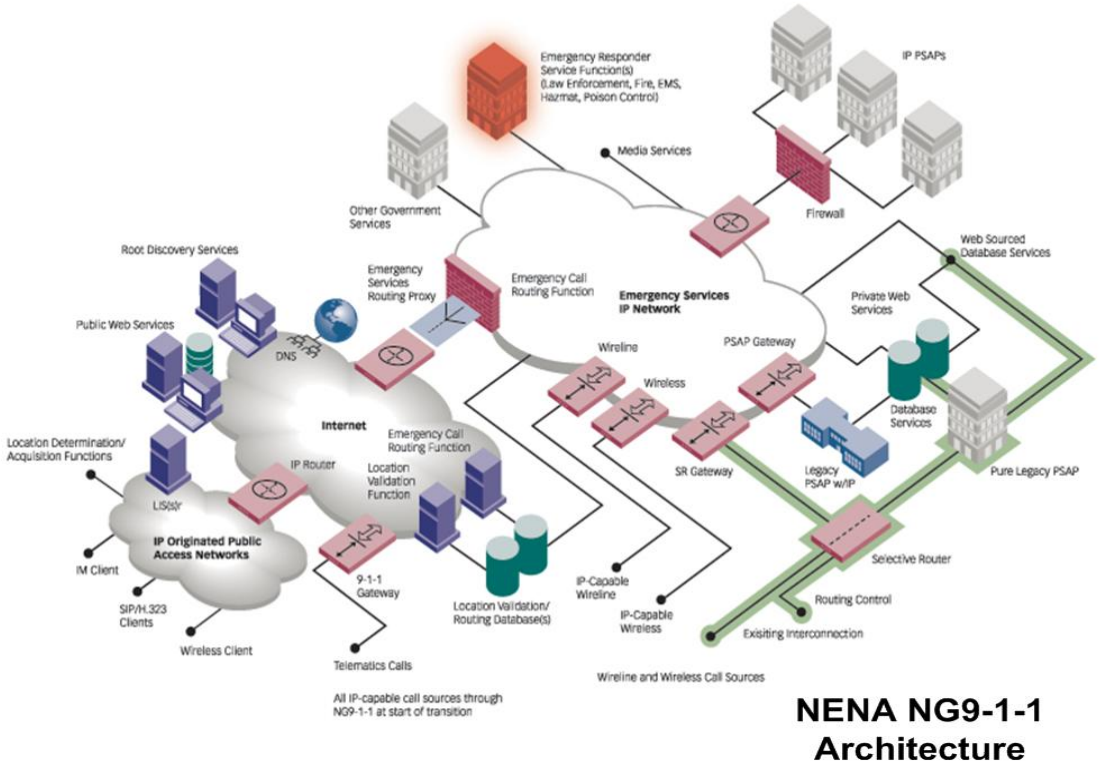

Figure 3—NENA NG9-1-1 Architecture

While a single Statewide ESInet in Idaho could serve all PSAPs within the State, the IECC understands the complexity of funding, procuring and maintaining a Statewide system. Idaho Statutes would most likely need to be amended to create a revenue stream to fund a Statewide ESInet.

The IECC and its Program Coordinator will use its positioning as a State of Idaho governmental entity to provide leadership and assistance in planning for NG9-1-1 and eventually developing a Request for Proposal (RFP) for an ESInet regardless of whether if a regional/metropolitan or Statewide ESInet is deployed. Later sections of this plan introduce tasks and work products that need to be completed from initiation to implementation of NG9-1-1.

3.1.1 State-level ESInet

A State-level ESInet would perform location-based emergency call routing using the location to service translation (LoST) protocol. All emergency calls ingress (enter) and egress (exit) the network via secured BCF. The State-level ESInet is interoperable with and interconnects to regional ESInets, Federal ESInets and ESInets belonging to other states.

The drawing below is a general concept of a state-level ESInet environment where all PSAPs in Idaho are connected to a single network.

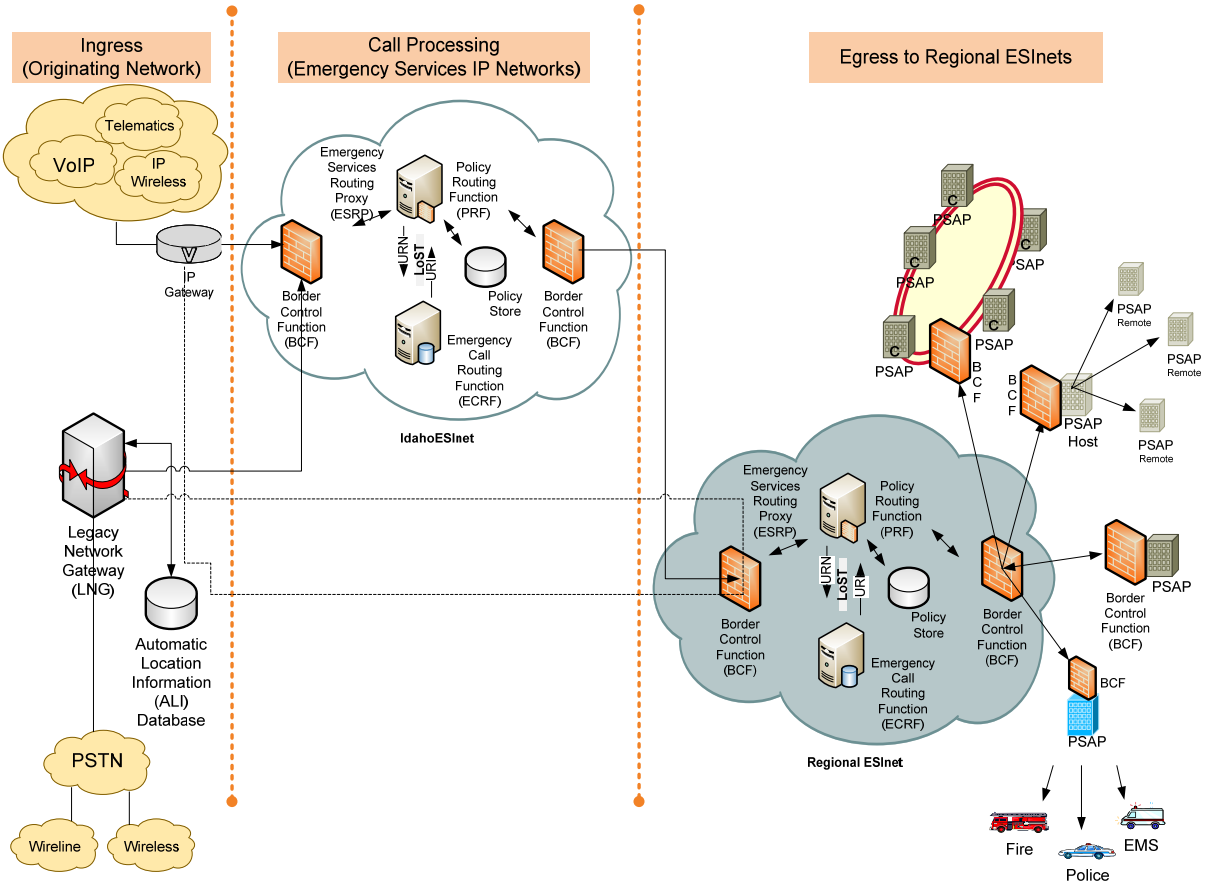

Figure 4—General Concept of a State-level ESInet

This network can be interconnected with neighboring state ESInets so that calls can be routed from border communities to the appropriate PSAP.

3.1.2 Regional ESInet

Regional ESInet connectivity would be driven almost exclusively by the presence of carrier and vendor services in a given geographic area. Metropolitan PSAPs, PSAP networks and rural PSAPs will have circuit and CPE (Information Technology [IT]) differences in how they interconnect to their Regional ESInet. A robust and 'diverse' IP connectivity is ***critical*** to maintain "five-nines" reliability.

The drawing below is a general concept of a regional ESInet environment where local PSAPs are interconnected to other PSAPs within the region.

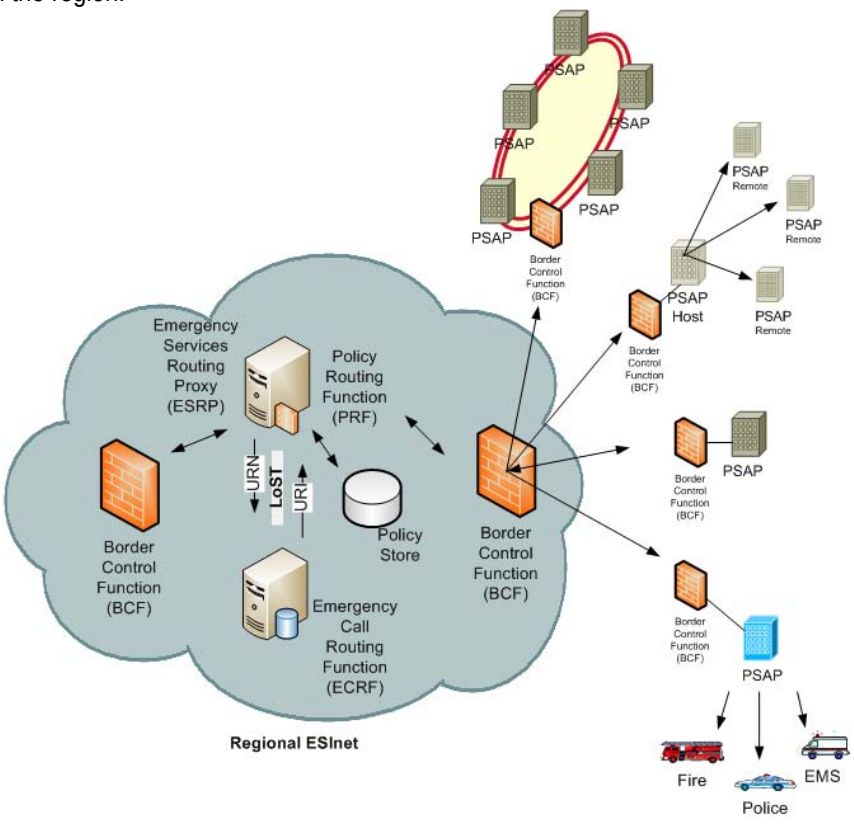

Figure 5—General Concept of a Regional ESInet Environment

3.1.3 Connecting Regional ESInets

The drawing below shows an example of an ESInet interconnected to other regional ESInets within the state.

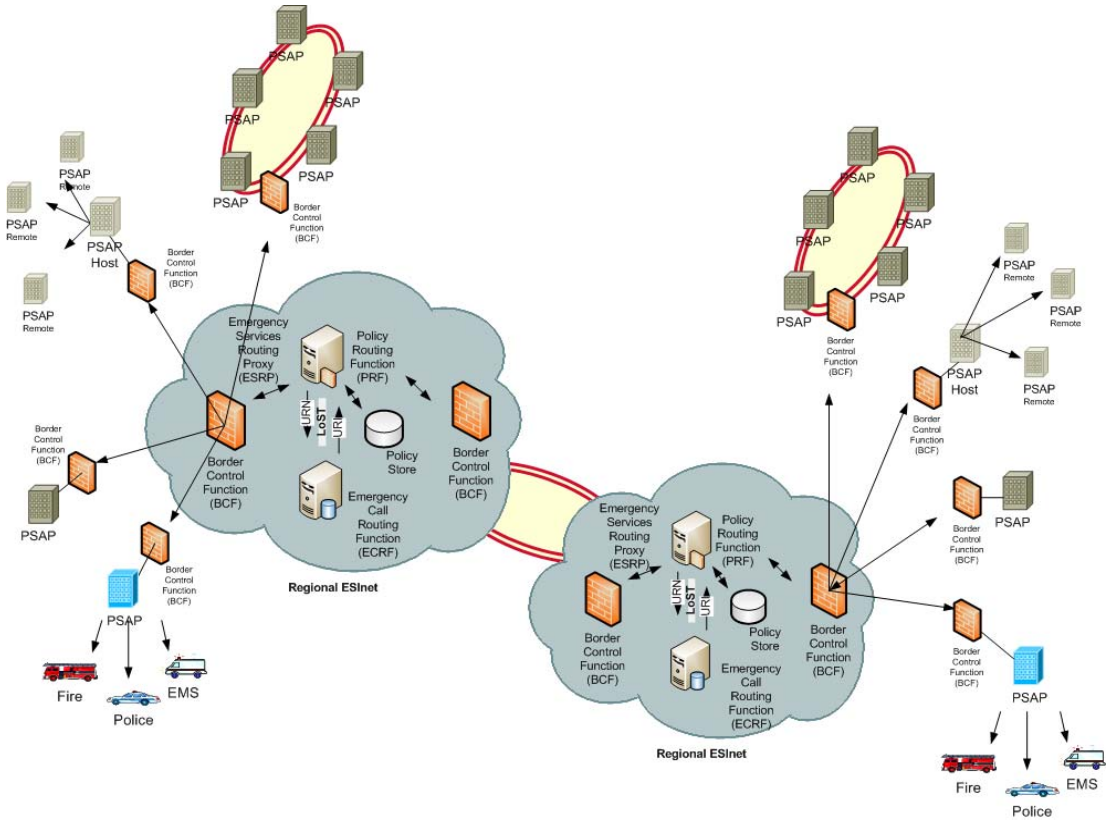

Figure 6—Example of an ESInet Interconnected to Other Regional ESInets Within the State

Both regional and statewide ESInets will allow and encourage the sharing of centralized applications and systems and will also support inter-network access to other databases, e.g., Emergency Operations Center (EOC) Hazardous Material information.

The networks will support interoperability among Idaho's diverse geography and enable dissemination of emergency incident information to help expand mutual aid. These benefits will create cost efficiencies among all PSAPs connected to an ESInet.

4. INITIATING AN IMPLEMENTATION PLAN

4.1 Initiation Phase

4.1.1 Overview

This Statewide NG9-1-1 Plan commences the Initiation Phase of the Idaho's NG9-1-1 implementation project. The Initiation Phase is comprised of tasks that will be the first steps in the transition to a NG9-1-1 environment.

4.1.2 Tasks

The description of each task is a detailed explanation of the importance of the task. Expected outcomes and dependencies are identified at the end of the section.

4.1.2.1 Statutory and Regulatory Environment

4.1.2.1.1 Obtain executive sponsorship

The IECC should actively seek and maintain executive sponsorship and support. The Idaho NG9-1-1 Initiative seeks to collaboratively transform Idaho's 9-1-1 system into a robust NG9-1-1 system that is capable of effectively supporting the growing needs of Idaho residents and visitors. Such an effort involves the coordination and cooperation of multiple entities and stakeholders. The complexities involved in a project of this magnitude require active and sustained executive support.

4.1.2.1.2 Align role of Idaho Emergency Communications Commission with responsibilities and requirements unique to Next Generation 9-1-1

Before diving into the assessment and analysis of statutes and regulations in preparation of NG9-1-1, it will be important for the IECC to assess its current role and assure that it has the authority and capability for Statewide planning, coordination and implementation of a NG9-1-1 system.

While staffing PSAPs and handling 9-1-1 calls will remain local functions, aspects of NG9-1-1 will require state-level planning and coordination. The need for statewide coordination has been introduced and continually stressed by Congress. The Wireless Communications and Public Safety Act of 1999 encouraged states to implement seamless, end-to-end emergency communications services. The 1999 Act notes that this "requires statewide coordination of efforts of local Public Safety, fire service and law enforcement officials, emergency dispatch providers, and transportation officials; the establishment of sources of adequate funding for carrier and Public Safety, fire service, and law enforcement agency technology development and deployment; the coordination and integration of emergency communications with traffic control and management system "The Ensuring Needed Help Arrives Near Callers Employing 911 (ENHANCE 911) Act of 2004, as amended, further reinforced and expanded on the concept of state-level leadership by making it a requirement for the receipt of grant funding.

The operations of the IECC need to be assessed to determine if adequate budget, staffing, and training levels are in place and what changes are necessary to support migration to NG9-1-1 and beyond. It will be necessary to assess current staffing levels, capabilities, and other budgetary concerns necessary for the IECC to adequately and effectively fulfill its obligations in a NG9-1-1 environment. It is likely that the responsibilities of the IECC will increase, thus potentially requiring a budget adjustment and increased staffing, training, and other similar requirements. As addressed in the Background section of this Plan, the IECC is currently budgeted for one employee which is the position of the E9-1-1 Program Coordinator. The position is already strained to keep up with the current needs of the IECC. Additional staff will be required to staff additional duties related to NG9-1-1. A staffing assessment should be conducted to determine the appropriate level of staffing needed.

The IECC should reevaluate its role during and after the transition to NG9-1-1.

4.1.2.1 Governance

4.1.1.2.1 Consider the Need for NG9-1-1 Governance

As a result of the way 9-1-1 and E9-1-1 evolved, the 9-1-1 system is made up of independent and unconnected systems with varying levels of capability. Up to this point, "who is responsible for what," and "who owns what" at what level of system operations has not been an issue because 9-1-1 systems are completely isolated from each other. But, the 9-1-1 environment is in transition as a result of technological advancements, consumer expectations, and the need for greater interoperability and data sharing capabilities. The technological transition that is occurring requires that the historical institutional governance structures that are in place also transition into the Next Generation of 9-1-1.

By nature, 9-1-1 is a locally based service and this fact is part of the reason why 9-1-1 governance is so diverse. Historically, a state's 9-1-1 Authority is the governance group at the state level concerned with planning and preparation for 9-1-1 service evolution. Regardless of the degree to which the state-level or statewide entity exercises authority over 9-1-1 service, 9-1-1 largely continues to be governed at the sub-state level and each local jurisdiction governs 9-1-1differently than any other jurisdiction.

The 9-1-1 environment becomes more complex with the transition to NG9-1-1 and will require collaboration among all the stakeholders in a way that was not necessary in the past. Policy and governance issues cannot be addressed by individual PSAPs or individual 9-1-1 authorities.[16] Governance for 9-1-1 at the sub-state level is focused on three types of stakeholder groups; regional 9-1-1 authorities, PSAP host local governmental agencies, and the PSAPs themselves. While those stakeholder groups will continue to be central to the transition to NG9-1-1, NG9-1-1 is not intended to reflect closed systems that are unique to the delivery of 9-1-1 calls, or local sets of emergency responders. Next Generation 9-1-1 is designed around shared, interconnected systems potentially involving a wide variety of public and private stakeholders in a position to facilitate emergency response and incident management.

[16] Next Generation Partner Program, Next Generation 9-1-1 Transition Policy Implementation Handbook, March 2010, 2.

A NG9-1-1 system is supported by a network environment that separates data "transport" from those "applications" that ride on top of that transport. Applications are those task specific functions that are designed to ride on top of the transport involved (e.g., the delivery of a 9-1-1 call). For Public Safety, the transport example above is the ESInet.

Emergency Services Internet Networks have the ability to connect a plethora of stakeholders that all have a common interest in Public Safety and emergency services. The ESInet provides the "opportunity" to interact and share data, resources and functions beneficial to emergency incident outcome. There is one key feature of this environment that potentially impacts governance. Application platforms are independent of the ESInet. Who owns, deploys and/or manages an ESInet may not be the same stakeholders that own, deploy and manage the applications utilizing the ESInet for transport and connectivity. The delivery of a 9-1-1 call may represent only one application of many. Other applications may include first responder communications, additional incident data providers and incident management functions. The FCC's Network Reliability and Interoperability Council VII suggested that such connectivity could extend well beyond the traditional Public Safety community, and include the following:

- Traditional Public Safety agencies: law enforcement, fire services, EMS, 9-1-1
- Citizens and businesses: connections between them and agencies (e.g.; E9-1-1, truck fleet management systems)
- Business safety providers (e.g.; telematics, alarm monitoring systems, hazmat service providers)
- Hospitals/Clinics
- Public health
- Emergency management
- Transportation departments
- Different transportation modes (e.g.; railroads, ports, trucking)
- Non-governmental organizations: Red Cross, Salvation Army, Cleary Emergency Restoration Trailor (CERT), mountain rescue groups, etc.
- Mental health organizations
- National Guard
- United States Department of Defense (US DoD)
- Utilities, public works, recreation departments
- Media
- Schools
- Critical infrastructure companies[17]

Interconnection between these kinds of stakeholders provides an opportunity for coordination and the sharing of information and data that would ultimately benefit emergency response and incident outcome. But, NG9-1-1 networks, applications and enhanced data availability by themselves won't bring 9-1-1 into the next generation. There are "human processes" that must be addressed to realize the full potential of NG9-1-1 including system management, policy, institutional, and governance considerations.

[17] FCC NRIC VII FG1D, 62, *available at* http://www.nric.org/fg/index.html (Last visited2/22/13).

4.1.1.2.2 Define and engage the Stakeholder community

Initiating NG9-1-1 Governance involves identifying the stakeholder community and defining how they will be engaged throughout the Idaho NG9-1-1 Initiative. Successful deployment of the Idaho NG9-1-1 System requires interaction and partnership with a wide ranging community of stakeholders. Stakeholders might include local 9-1-1 and government authorities, legislators, vendors, telecommunications companies, special interest groups, and others. Identify *who* the primary, secondary and tertiary stakeholders are, and *how* they will be engaged during the process. Stakeholders must actively represent their constituency throughout the process. At the same time, each stakeholder must come to the table prepared to understand the needs of the other stakeholders and strive to achieve mutually agreeable compromise.

4.1.2.2 Technology

Idaho will need to determine whether it currently has the authority to manage the technology and interconnections between multiple local and regional ESInets. Emergency Services Internet Networks are the IP-enabled backbone networks over which NG9-1-1 services are delivered. They host numerous hardware and software application layer services that support interoperability among diverse regional/local networks and agency applications.

Idaho will also need to assess whether it has an adequate mechanism to effectively coordinate the activities of local 9-1-1 authorities and other Public Safety or government stakeholders who may share the ESInet backbone (including interconnections with ESInets in neighboring states, or federal entities). The ability and authority to coordinate the technology employed, Public Safety agencies that will use them, and manage the interconnections between multiple regional ESInets are essential State-level functions in a NG9-1-1 environment. Idaho will need to establish minimum technology requirements and processes for the PSAPs. Establishing these technology requirements should involve prospective vendors and suppliers to validate products are available to meet the defined requirements. Once those have been identified, the State should develop a list of "approved technology" that can provide the needed delivery of service, as well as any interoperability requirements.

4.1.2.3 Operations

One essential task to operations in the Initiation Phase is to create an education and awareness program for the State. This plan must be created with a target audience in mind. Implementing a NG9-1-1 system statewide affects PSAPs, first responders and citizens at many levels. Creating an education and awareness plan from the very beginning in the Initiation Phase will help with public expectations and support throughout the project. A robust education and awareness campaign should include (but is not limited to) the following:

- Targeted messaging
- Conference appearances
- Presentations
- A list of talking points for PSAP leaders to use to educate stakeholders in their individual communities
- Media policies

A well-planned education program will help garner support throughout the 9-1-1 community in Idaho, as well as other stakeholders throughout the State. This effort will begin in the Initiation Phase but will be carried out throughout the entire NG9-1-1 project.

4.1.3 Key Decision Points

The State (including the IECC) must determine their vision of a Statewide NG9-1-1 system. Additionally, the State needs to identify key stakeholders and determine how the NG9-1-1 vision aligns with these stakeholders. Once these stakeholders are identified, the state should determine how, when and what kind of involvement they will have over the life of the project. Decisions will need to be made regarding an educational awareness campaign including scope, scale, and financial impact.

4.1.4 Critical Dependencies

Gaining support for the NG9-1-1 project will depend heavily on the support of the IECC and support of stakeholders across the state.

Creating an education and awareness program will also hinge on support from the IECC and stakeholders, as well as financial backing from appropriate organizations.

4.1.5 Work Products

The following work products are outputs of this phase:

- Stakeholder List
- Stakeholder Involvement Criteria
- Educational Awareness Campaign Plan

4.2 Assessment and Analysis Phase

4.2.1 Overview

An assessment is an important step in a NG9-1-1 project. Idaho should begin by assessing its current 9-1-1 system to fully understand the capabilities of the current system and what equipment is currently in use. This assessment will help Idaho to plan and prepare for a transition to an upgraded NG9-1-1 system. The tasks below identify important areas that need to be assessed in order to plan for a successful transition to NG9-1-1.

4.2.2 Tasks

The following sections describe each task, why they are important, and expected outcomes.

4.2.2.1 Statutory and Regulatory Environment

Conduct an assessment and analysis of current laws, regulations and tariffs that impact 9-1-1 service in Idaho to determine whether changes are necessary to support NG9-1-1. From a regulatory perspective, NG9-1-1 presents a new set of challenges and decisions. Next Generation 9-1-1 systems are typically much larger in scope and provide service to multiple jurisdictions and diverse agencies, therefore, changes in policy will be a critical part of establishing seamless, end-to-end NG9-1-1 systems. Idaho's assessment and analysis should include a review of the following areas as they relate to 9-1-1 and NG9-1-1:

- Statutes, regulations, tariffs and agreements
- Funding
- Establishing Statewide ESInets
- Confidentiality
- Liability

The following sections discuss each of these topics.

4.2.2.1.1 Review Statutes, Regulations, Tariffs and Agreements

Current Idaho 9-1-1 related laws, regulations and tariffs were written for E9-1-1; NG9-1-1 did not exist. Therefore, Idaho's laws, regulations and tariffs make specific references to older technologies that are not necessarily compatible with NG9-1-1 and may present roadblocks to implementing NG9-1-1. In order to provide a seamless and efficient transition from E9-1-1 to NG9-1-1, it is essential that Idaho assess and analyze all current laws and regulations to assure that they have a mechanism to keep pace with advancements in telecommunications and 9-1-1. A few examples of legislative/regulatory matters that should be assessed include:

- Provisions regarding the eligible use of 9-1-1 funds.
- Provisions that reference or require specific legacy technology components of E9-1-1 service; technology neutral provisions are preferable.
- Language (including provisions in tariff) that prohibit the sharing of 9-1-1 system components and data (with appropriate safeguards for security and confidentiality).
- Existing 9-1-1 service arrangements and tariffs that inhibit new entrants from making similar competitive services available to state or local authorities responsible for procuring 9-1-1 services.[18]
- Tariffs and any applicable interconnection agreements should also be analyzed to assure that they do not contain provisions that would impede the new interconnections and relationships that are necessary for a NG9-1-1 system.

4.2.2.1.1.1 Funding

Funding sources need to be adequate to support migration to NG9-1-1 and they must be consistent with emerging technologies."[19] In order to maximize funding and ensure sufficient resources are made available to implement and

[18] National Emergency Number Association Next Generation Partner Program Next Generation 9-1-1 Transition Policy Implementation Handbook, March 2010, 14.

operate the NG9-1-1 system, Idaho should review all current funding provisions. This review should focus on making sure that there will be adequate revenues to fund services throughout the transition (when costs will be temporarily higher) and beyond. Additionally, eligible uses of funds need to be reviewed to ensure unique NG9-1-1 system components are covered. A new funding model may be required in order to generate adequate funds from all kinds of telecommunications providers. Section 2.1 of this plan reviews the current funding structures in Idaho.

4.2.2.1.1.2 Confidentiality

Like the rest of the nation, Idaho's 9-1-1 systems are dedicated, closed, single purpose systems. They exist solely for transmitting 9-1-1 calls and data and nothing else. Typically 9-1-1 call recordings and data in Idaho are stored at the PSAP that received and dispatched the call. Preserving the confidentiality of this information and retaining appropriate records as required by local or state law is a fairly straightforward process. As Idaho transitions to NG9-1-1, today's 9-1-1 voice and data will be shared, transferred, and perhaps stored in more than one location (including remote, off site locations). A NENA publication accurately observed that "Maintaining confidentiality under those circumstances is not something envisioned by current local, state, and federal confidentiality, retention and disclosure laws."[20] Therefore, Idaho will encounter a new challenge: ensuring that information delivered over NG9-1-1 systems is delivered to the appropriate PSAP and can be appropriately shared with federal, state and local emergency response organizations *while* conforming to applicable federal, state, and/or local confidentiality, disclosure and information retention statutes and rules.

4.2.2.1.1.3 Liability

Another significant challenge related to regulation and policy for NG9-1-1 is liability. Lack of legal clarity on the issue of liability can lead to significant issues, including delays in provisioning critical NG9-1-1 services. The New and Emerging Technologies 911 Improvement Act of 2008 (Net 911 Act) expands state liability protections to PSAPs, services providers and their vendors. The NG9-1-1 Advancement Act of 2012 extends immunity from liability to NG9-1-1 service providers specifically and to PSAPs.

4.2.2.1 Governance

To begin the process of creating a governance model it is necessary to conduct a thorough analysis of the governance frameworks that exist in Idaho today. Such an analysis of State, county and local decision making and authority will shed light on how decisions are made with regard to 9-1-1 in Idaho. It will also be helpful to look at governance models outside of the 9-1-1 purview in order to identify any new models that might work for the NG9-1-1 system.

Along with the assessment of governance models, an assessment of the state statutory environment and policies will need to be undertaken to assure that they support these new and evolving arrangements, and institutional structures. NENA has observed that "[t]ransitioning our nation's legacy 9-1-1 system to a modern IP-based Next Generation

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19 FCC, Communications Security, Reliability and Interoperability Council, "Working Group 1, December 2011, 40, *available at* http://www.nric.org/fg/index.html. (Last visited 2/22/2013.

20 Ibid, 18.

9-1-1 (NG9-1-1) system must be a major policy objective at all levels of government."[21] Following is a list of state/sub-state governance related responsibilities, activities and authorities that NENA has identified as being essential to the full implementation of NG9-1-1:

- Ensure that an organization (or organizations) exists, with appropriate authority and/or capability for statewide planning, coordinating and implementing NG9-1-1 systems
- Confirm that such planning and coordination reflects effective coordination with relevant stakeholders within and beyond the state
- Ensure that appropriate state-level authority exists to adopt and enforce appropriate industry-based standards, rules, policies and procedures
- Evaluate and implement regulations and laws that facilitate (or do not inhibit) the local, regional and state interoperable environment of NG9-1-1, recognizing the intergovernmental, public/private IP-based, software and database controlled structure of NG9-1-1,
- Ensure statutory support for intergovernmental cooperation and arrangements essential to an efficient statewide system environment
- Ensure that policymakers at all levels are formally committed to the development and deployment of interoperable Statewide ESInets as a fundamental 9-1-1 and emergency communications policy objective
- Ensure that policymakers are committed to providing authority for 9-1-1 entities to work interactively through cooperative governmental arrangements to support regional and state-level NG9-1-1 systems that maximize interoperability and functional sharing of resources and costs[22]
- Ensure changes in the state/federal regulatory environment surrounding the changing nature of competition within the telecommunications industry related to NG9-1-1 are considered and carried-out In the Next Generation Partner Program's *Next Generation Transition Policy Implementation Handbook*, NENA noted that "it is critical that state regulatory bodies and the FCC take timely and carefully scrutinized action to analyze and update existing 9-1-1, PSTN, and IP rules and regulations to ensure they optimize 9-1-1 governing authority choices for E9-1-1 and NG9-1-1 and foster competition by establishing a competitively neutral marketplace."[23]

4.2.2.2 Technology

A detailed assessment of current technology systems and providers is needed to properly identify the technology requirements and steps needed to migrate from the current 9-1-1 system to a NG9-1-1 system. This assessment will identify technology and systems that may need to be replaced and upgraded. This assessment will enable the State to:

- Identify technical functions that are important to the current systems
- Identify current infrastructure components that can be used with the NG9-1-1 system
- Assist in determining the conceptual design of the system

The following technologies and systems should be assessed:

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21 National Emergency Number Association (NENA), "Next Generation 9-1-1
March 2010, 1*, available at*, http://www.nena.org/?NGPPPolicyTransHndbk

22 Ibid.

23 NENA Next Generation Partner Program Next Generation 9-1-1 Transition
12.

- PSAP locations
- Call volumes
- Call flow
- Location of serving offices/selective routers
- ALI provider information
- Current bandwidth capacity
- Current redundancy levels
- Geographic coverage area
- Facility locations
- Current plans for interoperability
- Operational infrastructure
- Regional connectivity options
- Hardware
- Customer premise equipment (CPE)
- hardware (e.g. Private Branch Exchanges [PBXs], switches, servers, workstations, trunks)
- Software
- CPE software (e.g. call taking applications,)
- CAD systems,
- Emergency Notification Systems,
- Management Information Systems (MIS) Databases
- Data
- GIS

Geographic information systems will play a far more critical role within the NG9-1-1 environment. Today, GIS is primarily used within the mapping modules of CAD systems or other like-systems, but not routing. However, within NG9-1-1, all 9-1-1 calls will be routed based on location using GIS datasets. The change to GIS-enabled call routing re-emphasizes the priorities for the way Public Safety departments manage and store location data.

The first step Idaho should take in preparing its data for NG9-1-1 is to assess the GIS datasets across the State in preparation for a more comprehensive NG9-1-1 data readiness assessment. A data readiness assessment should include the following:

- Determine applicable Idaho Geospatial Information Office (GIO) Statewide policies and standards.
- Display existing GIS data layers used by each PSAP.
- Provide a baseline assessment between GIS data and MSAG to determine current accuracy level.
- Determine if PSAPs have taken steps to regionalize datasets with neighboring PSAPs and reconcile any edge-matching issues with neighboring roads and/or boundaries.
- Determine if a data maintenance plan is in place and the frequency of GIS data updates
- Determine what data standards and policies exist
- Review any existing addressing policies and inter-governmental data sharing agreements to ensure long term sustainability of GIS data accuracy, maintenance and standards
- Identify, assess and determine implementation of a statewide and/or regional enterprise GIS database repository(ies)

4.2.2.3 Operations

A PSAP is comprised of people and technology coming together to deliver Public Safety communications. In order to operate a PSAP, there must be a knowledgeable staff, as well as clear and effective policies and procedures that include a comprehensive training program.

With the transition to NG9-1-1, PSAP staff will undergo a change in roles and responsibilities. New technology will breed new forms of media that will be available to PSAP call-takers, dispatchers, and management staff. While this technology is implemented to improve 9-1-1 service levels, PSAPs will need to learn how to handle these new forms of "calls" coming into the PSAP such as text, video, and telematics. The U.S. Department of Transportation's (USDOTs) "A National Plan for Migrating to IP-enabled Systems" notes:

> *"The increased quantity of available multimedia data will enhance and expand existing call-taking functions. It may also extend the time it takes to process 9-1-1 calls, increase the workload of the call taker, and significantly change the call taker's experience (e.g., seeing the incident versus hearing the incident)."*[24]

Additional changes that can be expected with the NG9-1-1 transition are increased resource and data sharing across multiple PSAPs. While this increases the ability to respond to emergencies, it may present a new challenge to some PSAPs. Training and staffing concerns should be assessed and operational standards and policies should be created or updated to account for these changes in the PSAPs' operational models. The following operational models should be assessed in Idaho PSAPs to help achieve the goals of a successful NG9-1-1 transition:

- Operational management
- Policies and standards
- Staffing
- Training

[24] National E9-1-1 Implementation Coordination Office: A National Plan for Migrating to IP-Enabled 9-1-1 Systems, September 2009,1-4.

4.2.2.3.1 Operational Management

Establishing a management model prior to the NG9-1-1 transition will help PSAPs determine how to handle these new types of challenges as they arise. An operation management assessment includes the following:

- Interoperability across many jurisdictions
- Change management
- Rules adoption
- Application installation management
- Standards for interconnection

Idaho should start by determining what management mechanisms are in place and assess whether and how they will handle these operational challenges moving forward into a NG9-1-1 environment. This assessment can be conducted utilizing known benchmarks across the country. The results of the assessment will enable PSAPs to make the proper adjustments in advance of the technological changes that are coming in the future.

4.2.2.3.2 Policies and Standards

Operational policies and standards will need to be reevaluated to prepare for a transition to a NG9-1-1 environment. The State will need to work with PSAP managers to identify and implement changes in operational policies and standards to promote coordination, resource sharing, and confidentiality issues. Idaho will need to assess what is in place today and determine if changes will need to be made to prior to the NG9-1-1 transition. The state needs to determine which existing policies and procedures will remain in the NG9-1-1 environment and which will need to be adjusted moving forward.

4.2.2.3.3 Staffing

While PSAP staffing is and will remain a local issue in the State of Idaho, staffing models must be assessed in preparation for the changes NG9-1-1 will cause within the PSAP. Job descriptions and duties for staff positions will change in the NG9-1-1 environment because of new technologies and applications. Also, staffing numbers and requirements will likely change for similar reasons. Staff expertise will become critical as different skills will be needed to attend to the new network and equipment, as well as call taking and dispatching.

Public Safety Answering Points should be prepared for staff turnover challenges with the increased demands and training requirements before, during and after the transition to NG9-1-1. The State and local PSAPs should be aware of current PSAP staffing and monitor the staffing levels to determine the appropriate number of staff as they move through and complete the transition.

An assessment of the PSAP staffing across the state should be coupled with stakeholder input to create a staffing plan that will be part of an operations plan in preparing for the NG9-1-1 environment.

4.2.2.3.4 Training

As the State transitions to NG9-1-1, training is a major factor in preparation and operation of the new network. A training plan must be in place to prepare for the challenges to come. Telecommunicators will need to prepare for operating new technology, new types of data, new policies and procedures, and new standards. Consistent training across the State will help staff work within the new environment and with each other. Idaho should assess the training plans and requirements that are currently in place in the PSAPs. The State must also work with stakeholders to develop new or additional training standards in order to meet NG9-1-1 requirements. This plan should include a mechanism for periodic adjustments of the training program.

4.2.2.4 Security

Traditionally 9-1-1 has been a closed system thereby minimizing the risk and effectiveness of cyber attacks. However, the IP-enabled, interconnected nature of NG9-1-1 radically alters the attack surface of the local PSAP and the overall NG9-1-1 system. This exponential increase in attack vectors is magnified by the attractiveness 9-1-1 systems offer cyber attackers. Accordingly, it is critically important to ensure that cyber security controls are planned for and built into the system from the outset and over the course of the project. Cyber security should be architected into the Idaho NG9-1-1 System.

The NG9-1-1 Security Standards (NG-SEC) were released by NENA in early 2010. These standards provide detailed requirements on how to secure NG9-1-1 systems. Presently, several states, cities and counties have adopted, or are considering adopting NG-SEC standards as the core foundation of their security program. Next Generation 9-1-1 Security, when coupled with any additional customization of security controls necessary for the state of Idaho can become a useful framework to build an effective security program. In addition to considering the use of NENA security standards, the State may be required or choose to comply with additional federal and/or state security requirements.

Idaho's current 9-1-1 system comprises a wide-ranging set of telecommunications companies, CPE vendors, implementations, and local policy constraints. This broad spectrum of systems has likely created a wide ranging approach to mitigating security risks across the state. In order to gauge current risk levels an assessment is necessary. In order to integrate cyber security into the Idaho NG9-1-1 System it is necessary to establish a security baseline of the current system. As an alternative to assessing each individual PSAP (a task that would be both cost and time prohibitive), a statistical sampling that is representative of Idaho's PSAPs should be used (e.g. large/small, small, vendor A, vendor B, etc.). The security assessment should be based on the NG-SEC standards and any other applicable frameworks Idaho is required to comply with or that it intends to leverage in the Idaho NG9-1-1 System.

4.2.3 Key Decision Points

For the assessment and analysis phase, the State must plan for the scope of these assessments. Determining what must be assessed, how the assessments will take place, and who will perform these assessments are all decisions that must be made during this phase. Funding may be needed to conduct these assessments which require financial planning in advance.

4.2.4 Critical Dependencies

The assessments discussed in this section will each depend on the resources available to conduct the assessments. Additionally, the technology, operations, and security assessment will depend upon PSAP participation across the state. Examining related Statewide projects will be dependent upon cooperation of agencies representing those projects.

4.2.5 Work Products

The following work products are outputs of this phase:

- Regulatory, Legislative, Tariff, and Funding Study
- Governance Study
- Technology Assessment
- Operations Study
- Security Assessment
- Related Projects Study

4.3 Requirements Design and Planning Phase

4.3.1 Overview

Once all of the proper assessments have been completed to fully understand the current state of the Idaho 9-1-1 system, the State should have a snapshot of what needs to be done in order to be ready for the transition to NG9-1-1. Idaho can then begin to define the requirements for its NG9-1-1 system. Along with requirements, the State will also begin to define deployment options and create governance and deployment plans that will include security and operations issues.

4.3.2 Tasks

4.3.2.1 Statutory and Regulatory Environment

4.3.2.1.1 Update Statutes, Regulations, Tariffs and Agreements

Ensuring that statutory and regulatory requirements are appropriately defined is critical. Requirements should be identified based on the results of assessment of the statutory and regulatory environment introduced in the previous section of this Plan.

Begin the process of making necessary changes to laws, regulations, tariffs and other enforcement mechanisms based on the results of the regulatory, legislative and funding assessments. These changes have to be both defined and implemented at this stage so that any roadblocks are eliminated prior to the implementation of other NG9-1-1 tasks. For example, the NG9-1-1 environment is inherently competitive. Therefore, it is important that the Idaho regulatory environment, including tariffs and interconnection agreements provide competitive 9-1-1 System Security

Plans (SSPs) with the same reasonable and nondiscriminatory treatment as incumbent 9-1-1 SSPs. All such requirements should be neutral with regard to technologies, manufacturers or providers.

In order for Idaho to move forward with adopting a comprehensive, end-to-end NG9-1-1 system, the state should:

- Determine whether the changes identified in the assessment require statutory treatment, or would be better addressed through regulations or tariffs.
- Identify all of the appropriate stakeholders that will be affected by the changes and ensure their input.
- Determine whether the desired statutory and regulatory changes can be made through 9-1-1 and Public Safety leadership alone or are external experts needed?
- Develop materials to educate the state legislature, other agencies and regulatory bodies to ensure they understand how current regulations and laws promote or hinder NG9-1-1.
- Determine whether to draft a single, omnibus bill that addresses all of the issues or to address issues piecemeal.
- Seek waivers of some current rules and regulation in the short term during the initial transition to NG9-1-1 before final policy changes can be made.
- Adopt an appropriate strategy with the media to gain support for the overall transition to NG9-1-1 and specific policy related efforts.[25]

4.3.2.1.2 Define Funding Model

As noted, it is imperative to ensure that sufficient funding will be available to cover the increased costs that will be incurred during the transition from the current E9-1-1 system to the NG9-1-1 system. With the information gleaned from the assessment and analysis phase, Idaho should take positive steps to address the following items to maximize funding and ensure sufficient resources will be available to implement and operate the NG9-1-1 system:

- Assess reasonable and equitable fees on all end user communication technologies or services capable of accessing 9-1-1.[26]
- Define the eligible uses of 9-1-1 funds and establish penalties to deter misuse of funds.
- Ensure statutes, regulations and tariffs enable system components to be shared among the agencies and entities that use it and that there is a mechanism for these agencies and entities to share the costs.
- Audit service provider fee remittances annually to ensure accuracy and compliance with legislative intent.
- Audit state and local use of 9-1-1 revenues annually.[27]

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25 National Emergency Number Association Next Generation Partner Program *Next Generation 9-1-1 Transition Policy Implementation Handbook,* March 2010, 25.

26 Idaho should view this as a relatively short-term step. At some point in the future, an entirely different funding model may be more appropriate. *See* NENA publication, "Funding 9-1-1 Into the Next Generation: An Overview of NG9-1-1 Funding Model Options for Consideration," March 2007.

27 National Emergency Number Association Next Generation Partner Program *Next Generation 9-1-1 Transition Policy Implementation Handbook,* March 2010, 9-10.

4.3.2.1.4 Establish statewide emergency services IP networks

In order for Idaho to establish an ESInet, the State should develop requirements that consider legislating and funding State-wide ESInets (or regional, interconnected ESInets) and the NG9-1-1 services hosted on or accessed by them.[28]

Emergency service agencies should consider sharing infrastructure with other governmental entities as a matter of affordability.

4.3.2.1.5 Confidentiality

With regard to confidentiality, Idaho should consider the following when developing requirements:

- Update statutes to define a broad definition of a "9-1-1 call" using the concept presented in the USDOT's NG9-1-1 Initiative publications.
- Protect the types of 9-1-1 calls and call content that will exist in a NG9-1-1 environment adequately and make any necessary modifications.
- Address clearly the responsibility of all persons who may have access to 9-1-1 call information when that information is stored in non-local or shared repositories.
- Assure that non-local agencies or local PSAP telecommunicators working in a virtual PSAP environment have access to 9-1-1 call data and adhere to confidentiality provisions.
- Require state and local 9-1-1 governing authorities to develop standard operating procedures (SOPs) that govern who has access to 9-1-1 call information, under what circumstances and how.[29]

4.3.2.1.6 Liability

Idaho should leverage the assessments that were conducted to develop requirements that assure that all entities involved in emergency response in the NG9-1-1 environment are protected. Assure all statutory and regulatory language is technology neutral, rather than applying to any particular technology (e.g. wireline, wireless, VoIP), and extend liability protection to all types of originating service providers regardless of technology.

- Extend liability protection beyond the PSAP environment to all entities involved in emergency response.
- Apply liability protection to all 9-1-1 SSPs and their third party vendors, regardless of whether that SSP is a traditional regulated local exchange carrier (LEC) or an unregulated competitive SSP.
- Apply liability protections to providers of external data sources that support or supplement the normal information sent with a 9-1-1 call.[30]

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28 Ibid, 16-17.
29 Ibid, 19-20
30 Ibid, 21-23

4.3.2.1 Governance

Idaho should leverage the results of the governance initiation and assessment to identify the requirements necessary to support a collaborative vision of NG9-1-1 in Idaho. These requirements should be comprehensive and representative of the stakeholder community and applicable regulations and/or statutes. The complexities involved in managing the interconnections between state, regional and local NG9-1-1 systems requires a defined governance model that clearly identifies the roles, responsibilities, and authority by which decisions are made.

The Idaho NG9-1-1 governance model will be based on the outcome of the requirements definition phase and will be the framework for the management of the NG9-1-1 system. In order to create a consensus-based governance model that can be implemented Statewide, Idaho must prepare the stakeholders that were identified in the initiation phase to contribute in an effective way to the development of the governance plan. These stakeholders should have expertise in their field and an understanding of what is involved and expected of them in creating a governance model. It is important to train these stakeholders in NG9-1-1 to ensure they have a unified understanding of what NG9-1-1 is and how it presents a need for effective governance. Once these stakeholders gain an understanding of the task they will be able to provide input and gain ownership of the governance model. Their ownership will promote an atmosphere of acceptance of the model throughout the State. A governance model that is established using the feedback and consensus of those stakeholders that are impacted by the system will avoid roadblocks during the implementation of the NG9-1-1 governance model. USDOT's NG9-1-1 System Initiative noted that the "…deployment of NG9-1-1 will require increased coordination and partnerships among government and public safety stakeholders, 9-1-1 Authorities, service and equipment providers, and PSAP Administrators in planning and implementing NG9-1-1."[31]

The State together with its governance stakeholders will create a governance framework in the form of a charter or other mechanism that describes the governance structure in clear terms. An effective NG9-1-1 governance model will enable critical stakeholders to enter into complex service arrangements that insure the utility and quality of the services. The governance model for a shared system defines decision making processes and policies (such as change management) that will be responsive to PSAP needs and allow local participation. Roles must be assigned, security maintained, and every change managed. It will set forth policies and procedures and explain why they are in place. The governance framework will address but is not limited to:

- Scope
- Authority
- Roles and responsibilities
- Membership
- Stakeholder representation
- Components
- Agreements
  - Inter-local agreements
  - Interstate agreements
- Plans that need to be developed and maintained
- Reporting procedures

[31] USDOT NG9-1-1 Transition Plan, February 2009, 43.

- A tiered system of governance *may* consist of a board or council that uses standing committees with specific responsibilities such as a Technology Committee, an Operational Committee and a Training Committee. The Technology Committee may be made up of technical staff from both state and local entities with responsibilities for reviewing new applications, keeping up with security standards, and providing technical recommendations for the governance leadership.

Along with requirements definition and planning, this phase should include the active elimination of roadblocks to NG9-1-1 governance. Address those roadblocks that were identified during the assessment and analysis phase and plan for their elimination. Any changes to State statutes and regulations that were identified in the assessment and analysis phase should be initiated in order to support the new relationships and service arrangements that NG9-1-1 envisions. Any statute and regulatory changes that are required should be started as soon as possible in the planning stage because those processes have the potential to take a long time and delay the implementation of NG9-1-1.

The same new relationships and service arrangements must also be facilitated and institutionalized by formal agreements between the governmental agencies, units of Public Safety and other stakeholders involved. The necessary agreements should be identified and planned for during this phase. "Who is responsible for what," and "who owns what" at what level of system operations will need to be determined in the new NG9-1-1 environment. For example, NG9-1-1 involves network and system functions that may not be operated at the PSAP level, but might be the responsibility of a regional or state level entity in this new environment. Those arrangements and institutional design functions will have to be strategically addressed during the planning phase. People and entities in current Public Safety roles may be required to take on roles and responsibilities outside of their current scope in order to facilitate NG9-1-1. The FCC's NRIC VII suggested that "*... the roles of the PSAPs, responders, and related entities are expected to expand beyond traditional 9-1-1 services with higher levels of interaction, managed situational intelligence, enhanced capabilities, and more comprehensive communication and coordinated response services.*"[32] While the local nature of 9-1-1 is not likely to change, the full vision of NG9-1-1 will depend upon the development of new and more complex interrelationships and governing environments.

The technical requirements and planning for the NG9-1-1 system will impact the governance model that is implemented. Historically, the State 9-1-1 Authority is the governance group at the state level charged with planning and preparation for 9-1-1 service evolution, decision making and coordination of NG9-1-1 implementation in the State. The State 9-1-1 Authority may have operational and support responsibility for ESInet and NG9-1-1 functions if it is implemented at the state level, directly or through vendors.[33] However, NG9-1-1 systems can be built up from local and regional levels, in which case the governance model might be different. NENA's Next Generation Partner Program stated it this way: "*This is the case for three primary reasons: (1) in many states, the state-level governance structure and authority for state-level 9-1-1 entities, if such a structure exists, is largely based only on collecting and distributing 9-1-1 funds to localities, rather than administering and managing an overall state-wide 9-1-1 system; (2) many parts of the architecture and functions of NG9-1-1 systems may be more efficiently managed at a regional, state or even multistate level (while the 9-1-1 call-handling operations and response will remain primarily local), and (3) the increased information sharing capabilities of NG9-1-1 systems means that 9-1-1 and emergency*

[32] FCC NRIC VII FG1b, *available at* http://www.nric.org/fg/index.html> (Last visited 2/19/13).
[33] The Communications Security, Reliability and Interoperability Council Working Group 1 Report Dec. 2011, 30.

communications systems will be much more interrelated in a next generation environment, calling for more coordinated and cooperative governance of the entire emergency communications enterprise."[34]

4.3.2.2 Technology

Idaho should create detailed technical and functional requirements based on the results of the technology assessment and analysis phase, the unique factors present in Idaho, the needs of the stakeholder community, and lessons learned from other states migrating to NG9-1-1. Requirements should also address key issues of redundancy, availability, and incident response or disaster recovery as applicable.

Technical requirements should address the domains noted in table 2, below:

	Hardware Network: Routers, Switches, LANs: Workstations, Servers, etc
	Software Applications: CPE, etc Protocols: ECRF, etc
	Data Analytics: Enterprise Data Gathering, Reporting GIS: Mapping requirements, etc

Table 2—Technical Requirement

The State should use stakeholder focus groups to gather information that will be used to develop the requirements. Information acquired should include known standards, best practices, and technical solutions available on the market. Once the State defines the requirements it can prioritize them.

Support for the NG9-1-1 system after deployment will be critical. The State and its stakeholders must create a comprehensive and holistic support plan that addresses fault management, maintenance and monitoring. It should address desired service levels, Key Performance Indicators (KPIs) and other performance criteria. It should clearly identify who is responsible for each aspect of support, and provide detailed escalation paths. It should also synchronize with change management policies across the enterprise.

[34] Next Generation Partner Program, Next Generation 9-1-1 Transition Policy Implementation Handbook, March 2010, 2.

4.3.2.3 Operations

4.3.2.3.1 Define Operational Requirements

It is necessary for Idaho to define the operational requirements that need to be in place for a successful NG9-1-1 implementation. The assessment process coupled with key stakeholder input will provide the information necessary to define these unique requirements for the state. By going through the process of defining these operational requirements, the State will have an understanding of what needs to be in place to successfully operate the new system and what is important to the stakeholder community. The following is a non-inclusive list of items that Idaho may want to consider when defining their operational requirements:

- Operations Management
- Change management
- Rule adoption for new applications
- Interconnection standards
- Access management
- New users
- New technologies
- Policies and standards
- Statewide coordination
- Resource sharing
- Determine how "calls" will be handled
- Determine how new technologies and increased access will be handled
- Managing an influx of data into the PSAP
- New types of data for telecommunicators
- Training
- Determine the training that is necessary to support the changing system environment
- Training for changing job descriptions
- Training for new job requirements and expectations
- New skill sets in the PSAP
- There will be an increase in data and types of data
- New training standards and training assessments
- Staffing
- Determine new job requirements and descriptions
- Determine the staff needed to implement policies
- Analyze the need for additional positions and increased staff in the PSAP
- Determine what types of staff expertise is needed to operate the new system
- Work with POST for hiring standards and training requirements of staff

4.3.2.4 Security

During this phase, the State, with involvement of key stakeholders, will begin to define its security requirements. The definition process may incorporate the following activities or items:

- Security industry best practices
- Stakeholder surveys / focus groups

- Goals from the Idaho Strategic 9-1-1 Plan
- Consensus based standards
- Vendor specifications
- NG9-1-1 standards (e.g. NG-SEC)
- Idaho preference
- Interconnectivity constraints
- Security controls and safeguards.
- Frameworks, standards, regulations, compliance issues such as NG-SEC, National Institute for Standards and technology (NIST), Health Insurance Portability and Accountability Act (HIPAA), etc)

A security plan provides the overarching strategy and vision for securing the Idaho NG9-1-1 system and is the foundation of an effective security program. Ideally, it should come before an organization starts to select or implement security technology, managed services vendors, etc. It may be advisable for PSAPs to create their own security plans as well.

A security plan is the starting point for securing a NG9-1-1 system and formally documents the goals and objectives regarding the security of the NG9-1-1 system. Typically, a security plan accomplishes the following:

- Documents the goals, objectives and intentions regarding cyber security within the NG9-1-1 system
- Exercises due care by managing the risk of security exposure or compromise within the NG9-1-1 system
- Promotes and increases awareness of security across the NG9-1-1 system
- Identifies the standards and frameworks applicable by legislative, regulatory, policy, or choice with which the Idaho NG9-1-1 system shall comply (e.g. NG-SEC, NIST, Criminal Justice Information Services [CJIS], Idaho law/policy, etc.)
- Identifies the security policies necessary to implement and enforce objectives and goals
- Clarifies the security aspects of the management governance structure, as it applies to the Idaho NG9-1-1 system
- Identifies order of magnitude estimates for implementation of security across the Idaho NG9-1-1 system

The security plan must find the appropriate balance between cost, the limitations and restrictions imposed by the plan, and the risks to public safety.

4.3.2.5 NG9-1-1 Detailed Planning

- NG9-1-1 Master Plan
- Update legislation, regulations and funding Model(s)
- Update procurement vehicles / contracts
- Create governance model
- Create technology support plan
- Create an operations plan
- Create a GIS guide
- Create a security plan

4.3.3 Key Decision Points

For the Requirements, Design and Planning Phase, the IECC will have to decide who will contribute to determining the requirements for the Idaho NG9-1-1 System. There are also many technical decisions that need to be made at this point including what existing infrastructure will be used for the NG9-1-1 system, what elements will be included (e.g. calls, texts, video, telematics, sensors, etc.) and what transport methodologies will be used.

4.3.4 Critical Dependencies

The conceptual system design and detailed plans will depend on the successful and thorough completion of the preceding phases and tasks as well as available funding. All requirements definition tasks will depend on the cooperation and input of the 9-1-1 program staff, IECC and other stakeholder involvement.

4.3.5 Work Products

The following work products are outputs of this phase:

- Conceptual System Design
- Conceptual Design Document
- Regulatory, Legislative and Funding Requirements
- Governance Plan
- Technology Requirements Document (Hardware, Software, Data)
- Operations Requirements
- Security Requirements
- NG9-1-1 Master Plan
- Detailed Planning
- Updated Regulation/Legislation
- Governance Model
- Technology Support Plan
- GIS Guide
- Operations Plan
- Security Plan

4.4 Proof of Concept Phase

4.4.1 Overview

Performing a pilot or proof of concept project will test and validate the NG9-1-1 design concept on a smaller scale before being deployed statewide. A proof of concept may also help to encourage local PSAPs to participate in and buy into the NG9-1-1 planning and implementation. The following task details a proof of concept project, why it is important, and expected outcomes.

4.4.2 Tasks

4.4.2.1 Governance

The governance model that was formed as a result of the initiation, requirements design and planning phases should be implemented in conjunction with the other NG9-1-1 tasks for the purposes of testing the chosen governance model and related requirements. Detailed lessons learned should be documented for the governance portion of the proof of concept in order to update the master plan and develop a final system design.

4.4.2.2 Technology

Depending on the conceptual design and the selected deployment model(s) proof of concept/pilot projects can begin to be rolled out. Proof of concept/pilot projects are used to validate the NG9-1-1 Implementation Plan and to test the chosen solution. The proof of concept/pilot projects should involve a group of PSAPs that are representative of several PSAP types and different PSAP equipment. This sampling should reflect the various systems currently deployed or expected to be used in the NG9-1-1 system.

Each proof of concept/pilot project should use the requirements defined in the implementation plan. This effort can be used to validate selected portions or all of the requirements. The State of Idaho 9-1-1 Office, in conjunction with the pilot PSAPs and involved vendors should develop detailed project plans for each proof of concept/pilot project to include the equipment or process being validated, expected results, and testing processes. Detailed lessons learned should be documented for each proof of concept/pilot project for use in updating the implementation plan and developing a final system design.

4.4.3 Key Decision Points

Prior to the beginning of any pilot project, the State of Idaho must first determine the goals and success measurements for the proof of concept/pilot projects. This will be critical in the evaluation of the project upon completion and moving forward with NG9-1-1 deployment. The results of the proof of concept will also lead to updating the planning documentation and, most importantly, the requirements determined and documented in the design and planning phase.

4.4.4 Critical Dependencies

Proof of concept/pilot project(s) are dependent upon having a quality NG9-1-1 plan and following that plan throughout the process. The project should have the conceptual designed determined in the planning phase in place with the proper technology and standards. This scenario may require some statutory and regulatory changes in order to carry out the project. These projects also need sufficient funding in order to be carried out correctly and thoroughly.

4.4.5 Work Products

The following work products are outputs of this phase:

- Proof of concept project plans
- Proof of concept test results
- Lessons learned documentation

4.5 Implementation Phase

4.5.1 Overview

Once a pilot project is successfully completed and documented, the State of Idaho should move on towards the implementation phase of NG9-1-1. This is where the network will be deployed. A transition plan should be created in this phase to take the state as smoothly as possible from the pilot to actual implementation.

4.5.2 Tasks

4.5.2.1 Governance

Develop a transition plan for the governance model that executes the governance plan and applies the lessons learned from the proof of concept phase. Implement the transition plan in conjunction with the other NG9-1-1 tasks.

4.5.2.2 Operations

An important step in the implementation phase is creating a detailed transition plan that will take the State from the pilot phase into actual NG9-1-1 deployment. This transition plan will outline technical development, testing, implementation, and other initiatives important to the state of Idaho. This transition plan should contain specific details regarding the steps necessary to execute the NG9-1-1 Implementation Plan and deploy the PSAPs and other systems to the NG9-1-1 system. The state and stakeholders will be involved in developing the transition plan based on the Master Plan and the lessons learned from the pilot project.

Because a transition plan must account for Statewide and regional deployments, it is very important to have stakeholder input when developing this plan. Local PSAPs and regions should have their own transition plans that are in line with and complement the Statewide transition plan. Each PSAP and provider should be tracked. The plan should account for them and provide an order and a schedule for transition activities so that all of the participants are informed and ready for their individual transition to the NG-1-1 network. A transition plan should contain, at minimum, the following details:

- Roles, responsibilities, and authority of all stakeholders
- Process
- Detailed procedures and checklists
- Back out plans
- Change control plan
- Testing procedures and checklists

- Acceptance criteria
- Communications plan
- Technology
- Schedule

A transition plan at the State level will be instrumental in deploying NG9-1-1 across the State, however, this State-level plan will also help PSAPs and regions to plan and carry out the transition. Working together with all stakeholders will help to create a plan that can organize and coordinate a successful transition and deploy NG9-1-1 in a consistent manner that allows for success for all stakeholders. Working together to plan the transition will also allow the lessons learned from the pilot project to be communicated and used to improve the transition process and avoid making the same mistakes not only at the state level, but at the regional and local levels as well.

4.5.2.3 Technology

This phase also refers to the implementation of processes, policies and procedures that must be updated to migrate to NG9-1-1. The implementation phase is representative of the entire set of steps necessary to implement NG9-1-1 in Idaho.

During this phase the Idaho NG9-1-1 System should be deployed in a phased manner per a pre-developed transition plan. This phase should include the specific processes associated with installing needed equipment, testing the equipment, any related services, interconnecting PSAP's, and the call origination network to the NG9-1-1 system. At completion of the deployment, detailed as-built documentation of equipment and configurations should be created for each PSAP and the complete system. These as-built documents should be maintained on an on-going basis to reflect the actual system architecture.

Clearly, full participation in NG9-1-1 requires PSAP systems that can accept an IP connection and properly handle NG9-1-1 protocols in accordance with the NENA i3 standards. An open architecture will be necessary moving forward into future technologies. The NENA i3 standards reference these future technologies and the need for them to be compatible with the NG9-1-1 network. This will help to ensure compliance of new technologies that will be introduced after implementation of the network so that a network replacement will not be necessary to incorporate these technologies.

Several vendors have equipment available today that is NENA i3 compliant or that is currently in the migration process of becoming i3 compliant. Some vendors state that their IP-based equipment is "NG9-1-1 compliant" or "NG9-1-1 ready," when, in fact, the equipment satisfies only some aspects of NG9-1-1. For example, the system may accept Session Initiation Protocol (SIP) calls, but not the ALI data in the Presence Information Data Format Location Object (PIDF-LO). While such partial compliance with NG9-1-1 may be an asset, it may also be the source of many interoperability problems with equipment from other vendors. Ideally, a PSAP would replace its existing equipment with a fully NENA i3 compliant system. Such an approach would offer the maximum interoperability and achieve the goals of the State of Idaho in a timely manner.

It may be some time before the entire Idaho 9-1-1 system migrates to NG9-1-1. As such, a NG9-1-1 PSAP may have to continue to accept calls on legacy trunks and use legacy ALI systems. This can be accomplished by

installing Legacy Network Gateways (LNGs) at the PSAP in "front" of the NG9-1-1 equipment. Some vendors are implementing this sort of solution fairly inexpensively. Some refer to this as a "dual mode" PSAP, able to receive calls from both the legacy and the NG9-1-1 networks.

Some PSAPs may wish to wait until existing PSAP equipment reaches the end of life-cycle before incurring the cost of replacing existing equipment with NG9-1-1 equipment. When this occurs, there are several options:

- Wait until the PSAP is ready before migrating. This may delay migration of call originating networks to the ESInet infrastructure.
- Install a LNG converting NG9-1-1 signaling back to traditional trunking for the existing PSAP CPE. This limits PSAP functionality and may cause interoperability issues. Of particular concern is the functionality of the NG9-1-1 to legacy gateway with respect to functions such as call transfer.
- Operate limited new and old equipment side-by-side. This presents cost and operational challenges.

The initial deployments of NG9-1-1 are not expected to present serious challenges to call takers; from their perspective the operations of the old and new systems may not be significantly different.

Infrastructure, and service and support issues may be more difficult. Some PSAPs may have limited IP expertise in-house, and may have to seek assistance from local outside vendors. While there are many IP vendors, many have limited SIP, IP-telephony, and, especially, limited NG9-1-1 experience. Support may not come from traditional sources, such as the local telephone company. However, IP networks enable remote support in ways not previously possible, so much less on-site support may be required, and vendors may contract with local computer vendors for hardware support while providing NG9-1-1 software support remotely. This is possible because NG9-1-1 makes use of Commercial Off-the-Shelf (COTS) hardware.

4.5.3 Key Decision Points

During the transition phase, several key decision points must be considered. The State must define a transition methodology that works for all of the stakeholders. This will require communication and stakeholder feedback. Procurement methodologies must be decided upon including the financial impact of those decisions. Another important decision that must be coordinated with local PSAPs and regions is a deployment schedule. A deployment schedule must be specific and agreed upon by the stakeholders in order to plan for the appropriate steps to be taken during the transition.

4.5.4 Critical Dependencies

The creation of a transition plan is dependent upon the successful completion and documentation of the pilot project. Additionally, communication throughout the State at the state, regional, and local levels will determine the functionality of the transition plan.

NG9-1-1 deployment is dependent upon available funding and on whether the statutory and regulatory environment allows for this deployment to take place in the manner that the state plans for it.

4.5.5 Work Products

The following work products are outputs of this phase:

- Transition Plan
- Project Plan(s)

4.6 Maintenance and Management Phase

4.6.1 Overview

Once the Idaho NG9-1-1 network is in place, system management activities will be important not only to maintain the system but also to help the NG9-1-1 system meet its full potential presently and into the future. As technology grows and changes, the network will need to adapt. Users of the network may also shift once it is in place. All of these network maintenance issues must be planned for and managed in order to assure the network is being used to its full potential and remains secure and functional.

4.6.2 Tasks

4.6.2.1 Technology

With a fully deployed NG9-1-1 System, traditional lifecycle management activities of the system can commence. For example, these activities include:

- Fault management (technical support, break/fix, etc.). Detect, isolate, notify, and correct State-level and Regional ESInets' incidents and problem in the network
- System management and maintenance. The State-level and Regional ESInets' management and maintenance strategies must align to reduce the risk of unplanned failure in the ESInet. This strategy combines both Network Policy/Governance with Operations and the deployment of operational tools that provide oversight of the Idaho NG9-1-1 System. After coupling the IT Infrastructure Library (ITL) with the International Organization for Standardization (ISO) the State recognizes eight specific areas as a foundation of the fundamental State-level and Regional strategy for the ESInet hierarchy.
- Configuration management (changes, Upgrades, Improvements). Configuration Management verifies the impact of changes and the relationship to other configuration items (CI) before updating the change management database (CMDB) for the State-level and Regional ESInets.
- KPIs/performance management. Monitor and measure various aspects of performance so that overall performance can be maintained at an acceptable level for the State-level and Regional ESInets.
- Managed services (monitoring). Managed services should perform oversight functions as the State's agent. The contracted service should administer all aspects of interconnection, configuration, security, use, and maintenance of NG 9-1-1 by all service providers, by PSAPs, by PSAP vendors, and by any other stakeholder interconnected with the State of Idaho NG9-1-1.
- Security management. Once the design has been implemented monitoring must be put into place to ensure that pre-set thresholds are not exceeded for capacity of all security elements. When thresholds are close to being reached, then processes should be in place for adding additional resilient security components and services. The State-level ESInet and Regional ESInet could potentially be at risk of

security breaches such as spoofing. Policies should be followed that includes testing all products and services in a lab before implementation. Policies will be followed for patch management to ensure that security patches are kept up-to-date.

- Incident response/management. There is a potential risk of PSAP isolation or CPE failure in the new network. Contingency plans should be developed for the Regional ESInet re-directing calls to a pre-determined PSAP along with a contingency plan for recovering services to and at the PSAP.
- Dashboards/portals. The State-level ESInet and Regional ESInets have a need to be aware of service failure or termination, independent of the service interactions they initiate. To facilitate this requirement, the State-level ESInet and the Regional ESInet will need to create a dashboard/portal for notification best practices regarding service awareness that allow service requestors and providers deal with these cases in a consistent fashion.

4.6.3 Key Decision Points

There are several decisions that need to be made in order to manage the network effectively. Many of these decisions need to be made prior to the implementation of the network. One of the big advantages of NG9-1-1 will be the ability to add new forms of technology to the network. The State of Idaho needs to determine how new forms of technologies, data, and information will be allowed to use the NG9-1-1 network.

Another decision that will need to be made is regarding the policies and procedures for the network. These policies and procedures will need to be determined during the planning phase of this process, but will need to be reexamined and updated as the network is maintained.

4.6.4 Critical Dependencies

System management will depend largely on the following issues:

- Monitoring
- Fault Management
- Configuration Management
- Change Management
- Incident Response/Management

4.6.5 Work Products

Work products for the maintenance and monitoring phase will be ongoing throughout the day to day activities of maintaining a network. Through network maintenance and monitoring, the plan and other network documentation should be maintained as well. Plan maintenance is further addressed in Section 5 of this document.

5. MONITORING AND UPDATING PLAN

An important aspect of planning for NG9-1-1 is keeping the plan current and relevant as the state moves through the transition. Updating the State Plan will help to keep the 9-1-1 program, IECC, and participating entities on track and accountable to the objectives in the plan. On an annual basis, Idaho will assess the status of progress on the objectives and update the goals and objectives within the plan. This annual review can be administered by the 9-1-1 program coordinator. However, if during an annual review there is a situation where it is appropriate to revise, add or subtract goals and objectives, these types of changes must be approved by the IECC. Performing these types of reviews annually will allow flexibility in NG9-1-1 planning as regulations and technology changes. The plan, in its entirety, will be reviewed and updated every three years by 9-1-1 program coordinator and approved by the IECC.

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6. TIMEFRAME

The timeline illustrated below is a guideline to reflect the anticipated gating steps and time(s) to complete an initial PSAP implementation. Dependencies, such as funding cycles, regulatory changes, CPE readiness and facility preparedness, will impact timelines. As a result, every PSAP will require a unique view of the specific dependencies and deliverables at each stage or phase.

Figure 7—Timeline

Design, Strategy and Tactical Plans

Elements in the strategy and plans include:

- Modeling to determine validity of the design
- Sizing the applications according to best practices to ensure that not only the initial deployment model requirements are met, but that expected expansion and scalability needs are baked into the plans
- Reviewing reliability requirements
- Assuring that all availability requirements are evaluated, including continuity
- Developing and documenting recovery plans for additions, upgrades, and unforeseen service interruptions

Procurement

Elements in the procurement process include:

- Developing an RFP(s) for vendor response
- Selecting vendors to respond
- Analyzing responses and selecting a vendor(s) for award

Testing (Functional, Non-Functional and Adjustments) and Tactical

Elements in the testing and tactical phase include:

- Test plan development
- Validation processes
- Evaluation criteria
- Support strategy
- Controls
- Breach management

Network Deployment and Initial Conversion/Test

Elements in the network deployment and conversion include:

- Deployment management
- Configuration and release management

Final Testing (Functional and Cross-Functional) and Conversions

Elements in the final testing include:

- Knowledge gained
- Lessons learned

Project/Phase Closeout

Conversion of the successful testing of that PSAP delineates phase or project closeout. Any incomplete deliverables or objectives should be measured and closed as soon as practical to allow for project closure.

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7. CONCLUSION AND RECOMENDATIONS

There is an identified need for a Public Safety communications upgrade to NG9-1-1 in Idaho. The dramatic changes in technology and the telecommunications industry within the past 15 years have changed the public's expectations of Public Safety and emergency communications systems. Idaho recognizes the need to implement changes to keep pace, however, the State's aging Public Safety communications systems can no longer keep pace with industry changes. National agencies and associations such as NENA and USDOT have developed their visions of the systems required to provide Public Safety in the Next Generation. Idaho shares this vision and should take steps forward to provide a NG9-1-1 system that can facilitate the use of voice, video and data to enhance Public Safety in the State of Idaho. This NG9-1-1 plan is the first of those steps towards the implementation of a Statewide mission critical, secure, and fail-safe NG9-1-1 system.

There are many important tasks that need to be completed to help assure a successful transition to a Statewide NG9-1-1 network. Idaho can use this Plan as a roadmap to take the steps outlined herein and begin the transition to a NG9-1-1 network together with stakeholders across the state. Localities may also utilize this Plan to construct their own plans for their individual preparation for a NG9-1-1 system. Many of the concepts, plans and action items can be used by PSAPs and/or regions to plan for regional ESInets. This will help to promote coordination and interconnectivity throughout the state.

This Plan is a dynamic document and is meant to be reviewed and updated periodically as described in Section 5 – Monitoring and Updating Plan. As steps are planned and completed, subsequent steps may need to be adjusted throughout the transition process.

Recommendations

1. There are several recommended next steps for the IECC. These recommendations are outlined below.

The IECC should begin to implement the State of Idaho Enhanced/NG9-1-1 Plan.

This Enhanced/NG9-1-1 Plan identifies the steps to be taken in preparation for migration to a NG9-1-1 system, as well as the implementation and maintenance of a NG9-1-1 network in the State of Idaho. The IECC can take the necessary actions to continue down the path towards NG9-1-1 by initiating the phases and tasks outlined in Section Four. Each phase will require planning, communication within the IECC and input from stakeholders across the State.

2. The IECC should create the position of NG9-1-1 Program Manager that reports directly to the State of Idaho E9-1-1 Program Coordinator.

The primary responsibility of the NG 9-1-1 Program Manager is to manage the NG9-1-1 Deployment and Implementation Project for the IECC.

The Program Manager is responsible for the overall direction, coordination, implementation, execution, control and completion of the NG 9-1-1 projects assuring consistency with the IECC strategy, commitments and goals. The Program Manager will be the single point of accountability for project delivery and escalations in support of the

NG9-1-1 projects, responsible for the overall success of planning and implementing the project and assuring that it meets stakeholder needs and supports the initiatives of the IECC.

The Program Manager manages all aspects of NG 9-1-1 deployment project including the administration and execution to ensure project requirements are met and completed on time and within budget. The Program Manager manages the resolution of project performance and execution problems, handles the day-to-day relationships with the vendors and key stakeholders, manages the business and information reporting requirements of the project and prepares project reports.

The main job tasks and responsibilities of the Program Manager would include but are not be limited to:

- Lead the planning and implementation of the NG9-1-1 project
- Facilitate the definition of project scope, goals and deliverables
- Define project tasks and resource requirements
- Develop full scale project plans
- Manage project budget
- Manage project resource allocation
- Plan and schedule project timelines
- Track project deliverables using appropriate tools
- Provide direction and support to stakeholders
- Oversee project quality assurance
- Constantly monitor and report on progress of the project to all stakeholders
- Present reports defining project progress, problems and solutions
- Implement and manage project changes and interventions to achieve project outputs
- Submit project evaluations and assessment of results

3. The ICEE should create the position of E-9-1-1 Program Administrative Assistant that reports directly to the State of Idaho E9-1-1 Program Coordinator.

The primary responsibility of an Administrative Assistant is to provide office services that implement administrative systems, procedures, and policies, and monitor administrative projects. This responsibility includes; performing a wide variety of support functions; applying detailed program knowledge in developing and/or maintaining program records systems and/or in collecting information, preparing reports; performing related work.

The administrative assistant job duties would include but not be limited to:

- Answer, screen and transfer inbound phone calls
- Maintain electronic and hard copy filing system
- Retrieve documents from filing system
- Prepare written responses to routine enquiries
- Prepare and modify documents including correspondence, reports, drafts, memos and emails
- Schedule and coordinate meetings, appointments and travel arrangements for managers or supervisors
- Prepare agendas for meetings and prepare schedules
- Record, compile, transcribe and distribute minutes of meetings
- Open, sort and distribute incoming correspondence
- Maintain office supply inventories

- Ensure operation of office equipment by completing preventive maintenance requirements; calling for repairs; maintaining equipment inventories; evaluating new equipment and techniques.
- Provide information by answering questions and requests.
- Maintain supply inventory by checking stock to determine inventory level; anticipating needed supplies; placing and expediting orders for supplies; verifying receipt of supplies.
- Contribute to team effort by accomplishing related results as needed.

4. The IECC should continue to explore changes to the Emergency Communications Act.

As discussed in the current environment section, there are several provisions in the Emergency Communications Act that the IECC should focus on amending and adding to as Idaho moves forward to a statewide NG9-1-1 system. In order to prepare for NG9-1-1 and remove any statutory roadblocks to its implementation, the Act should be amended to include language that will account for future technologies, services, applications, and any devices that are capable of accessing 9-1-1. In a NG9-1-1 environment, there will be many technological changes that cannot be anticipated today. If the Act is amended to remove foreseeable roadblocks to NG9-1-1, then the implementation of NG9-1-1 will be more efficient and the Act will not have to be revisited every time a new technology is introduced in the future.

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8. GLOSSARY

ALI

Automatic Location Information is the address of the person placing the 9-1-1 call.

ANI

Automatic Number Identification is the telephone number of the person calling 9-1-1.

CAD

Computer Aided Dispatch

Call Access Services

All services and equipment required by carriers to send emergency data and calls to the Oregon answering points. Circuits for these connections are also included.

Circuit

A circuit is a connection between two points that can be made through various media, such as fiber and coaxial cable.

Core Connections

The core of the next generation network, which contains the servers performing the call routing functionality as well as the data centers. NG9-1-1 services and databases are included in this section of the network. This section of the network correctly identifies where the emergency call is to be delivered and applies supplemental information to the call flow.

Emergency Services IP Network (ESInet)

ESInet is an IP-based inter-network (network-of-networks) shared by all agencies that may be involved in any emergency.

Geographic Information System (GIS)

GIS is a computer software system that enables one to visualize geographic aspects of a body of data. It contains the ability to translate implicit geographic data (such as a street address) into an explicit map location. It has the ability to query and analyze data in order to receive the results in the form of a map. It also can be used to graphically display coordinates on a map (i.e. latitude/longitude) from a wireless 9-1-1 call.

ILEC

Incumbent Local Exchange Carrier

Internet Protocol (IP)

IP is the method by which data is sent from one computer to another on the Internet or other networks. IP is part of the Transmission Control Protocol (TCP)/IP family of protocols describing software that tracks Internet addresses of nodes, routes outgoing messages, and recognizes incomplete messages. IP is used in gateways to connect networks to the Open Systems Interconnection (OSI) network level 3 and above.

LATA

Local Access and Transport Area is the geographical area within which a local telephone company offers service.

Master Street Address Guide (MSAG)

MSAG is a database of street names and house number ranges within their associated communities defining Emergency Service Zones (ESZs) and their associated Emergency Service Numbers (ESNs) to enable proper routing of 9-1-1 calls.

PSAP

Public Safety Answering Point receives and processes 9-1-1 calls for a defined geographic area.

PSAP Connections

All the equipment (hardware and software), connections to the network, and firewalls needed to allow the PSAP to receive NG9-1-1 traffic from the call processing section of the network. This includes workstations.

Router

A router is a device that connects like and unlike LANs.

Service Provider

SP is an entity providing one or more of the following 9-1-1 elements: network, CPE, or data base service.

Switch

A switch is a device that opens or closes circuits, completes or breaks electrical paths, or selects paths or circuits. Switches look at incoming data to determine the destination address.

T1

T1 is a digital transmission link with a signaling speed of 1.544 Mbps; it is a standard for digital transmissions in North America. T1 is part of the progressive digital transmission pipes commonly referred to as DS or Digital Signal.

Voice over Internet Protocol (VoIP)

VoIP is a general term for a family of transmission technologies for delivery of voice communications over IP networks such as the Internet or other packet-switched networks. The IP address assigned to the user's telephone number may be static or dynamic.

GLOSSARY OF ACRONYMS

	-A-
ALI	Automatic Location Identification
APCO	Association of Public-Safety Communications Officials
	-B-
BCF	Border Control Function
	-C-
CAD	Computer Aided Dispatch
CERT	Cleary Emergency Restoration Trailer
CJIS	Criminal Justice Information Services
CMDB	Change Management Database
Coordinator	E9-1-1 Program Coordinator
COTS	Commercial Off-the-Shelf
CPE	Customer Premise Equipment
	-D-
DoD	Department of Defense
	-E-
E9-1-1	Enhanced 9-1-1
ECRF	Emergency Call Routing Function
EMD	Emergency Medical Dispatch
ENHANCE 911	Ensuring Needed Help Arrives Near Callers Employing 911
EOC	Emergency Operations Center
ESInet	Emergency Services Internet Network
ESRP	Emergency Services Routing Proxy
ESZ	Emergency Service Zone
	-F-
FCC	Federal Communications Commission
	-G-
GIO	Geospatial Information Office

GIS	Geographic Information System
	-H-
HIPAA	Health Insurance Portability and Accountability Act
	-I-
IECC	Idaho Emergency Communications Commission
IP	Internet Protocol
ISO	International Organization for Standardization
IT	Information Technology
ITL	IT Infrastructure Library
	-K-
KPI	Key Performance Indicator
	-L-
LATA	Local Access and Transport Area
LIS	Location Information Server
LNG	Legacy Network Gateway
	-M-
MDT	Mobile Data Terminal
MIS	Management Information System
MPLS	Multiprotocol Label Switching
MSAG	Master Street Address Guide
	-N-
NASNA	National Association of State 9-1-1 Administrators
NENA	National Emergency Number Association
NG9-1-1	next generation 9-1-1
NG-SEC	NG9-1-1 Security
NIST	National Institute of Standards and Technology
	-P-
PBX	Private Branch Exchange
PIDF-LO	Presence Information Data Format Location Object

Plan	State of Idaho Enhanced/Next Generation 9-1-1 Plan
POST	Peace Officer Standards and Training
PRF	Policy Routing Function
PSAP	public safety answering point
	-R-
RFP	Request for Proposal
	-S-
SIP	Session Initiation Protocol
SOP	Standard Operating Procedure
SSP	System Security Plans
State	State of Idaho
	-T-
TCP	Transmission Control Protocol
TCS	TeleCommunication Systems
TDD	Telecommunication Device for the Deaf
TTY	Teletype
	-U-
UPS	Uninterruptible Power Supply
URI	Uniform Resource Identifiers
URN	Universal Resource Name
US	United States
USDOT	United States Department of Transportation
	-V-
VoIP	Voice over Internet Protocol

APPENDIX A – IDAHO 9-1-1 SERVICE MAPS 2008 – 2013

The Idaho 9-1-1 Service Maps 2008-2013 can be found on the following pages.

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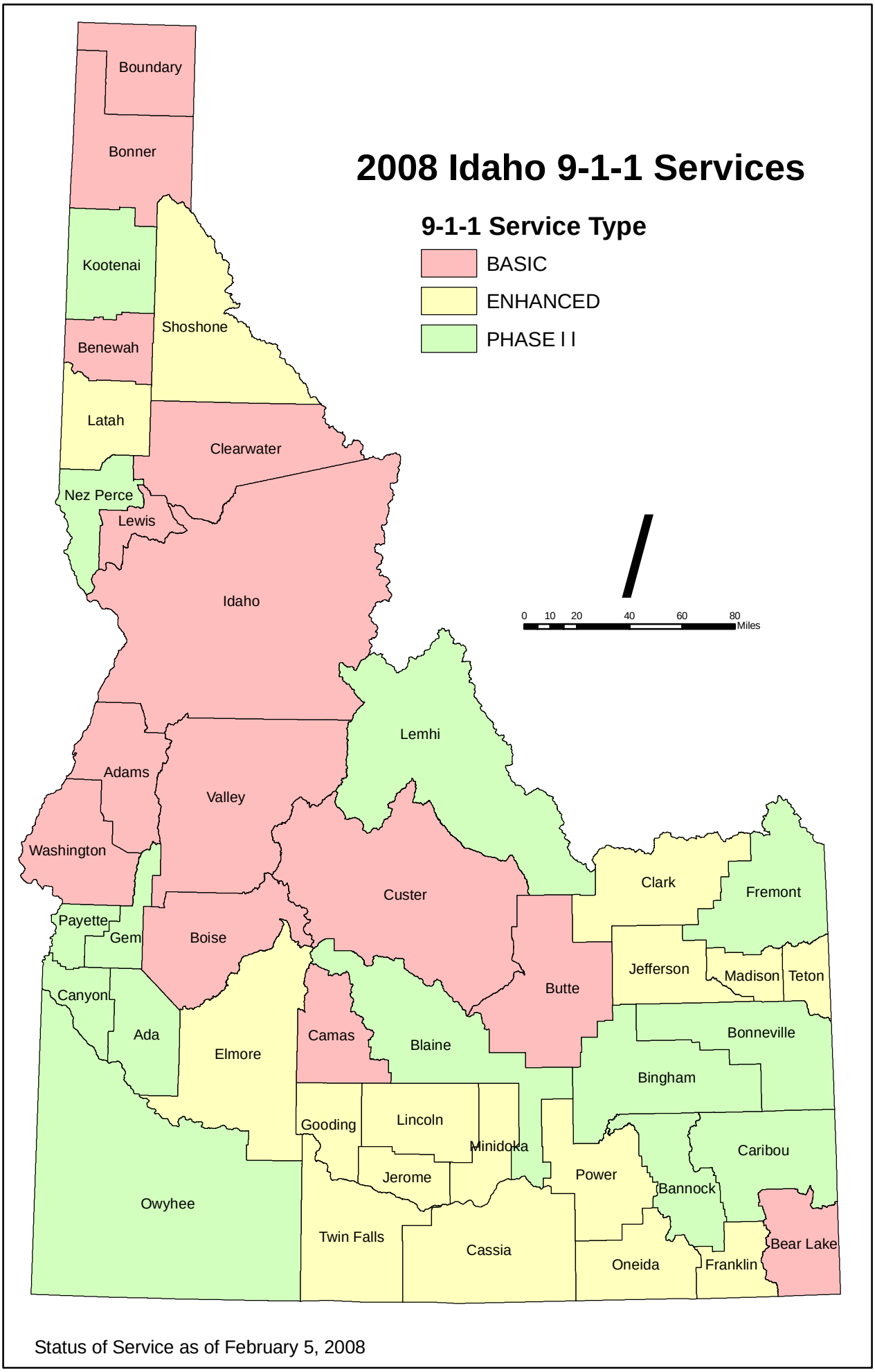
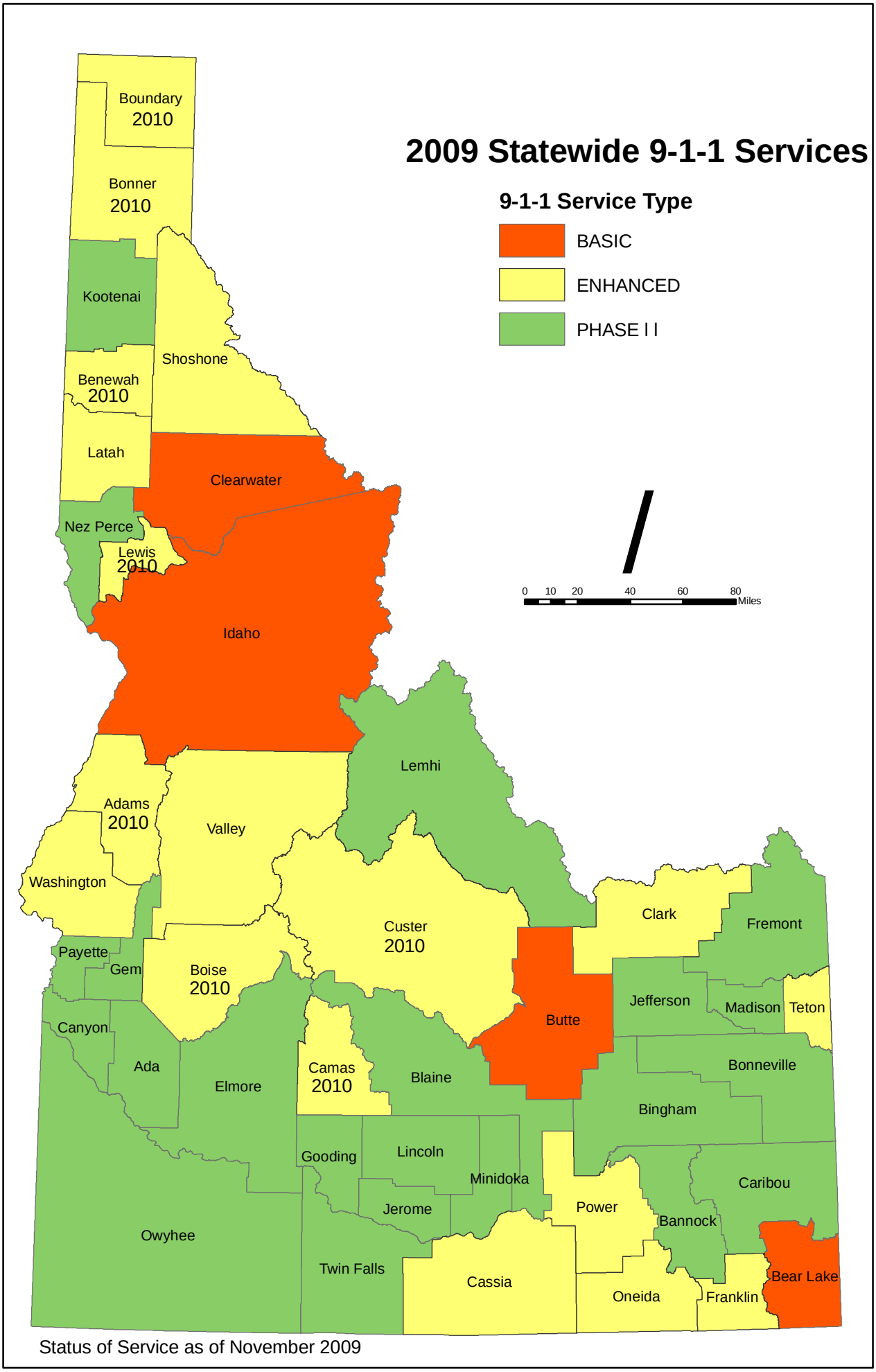
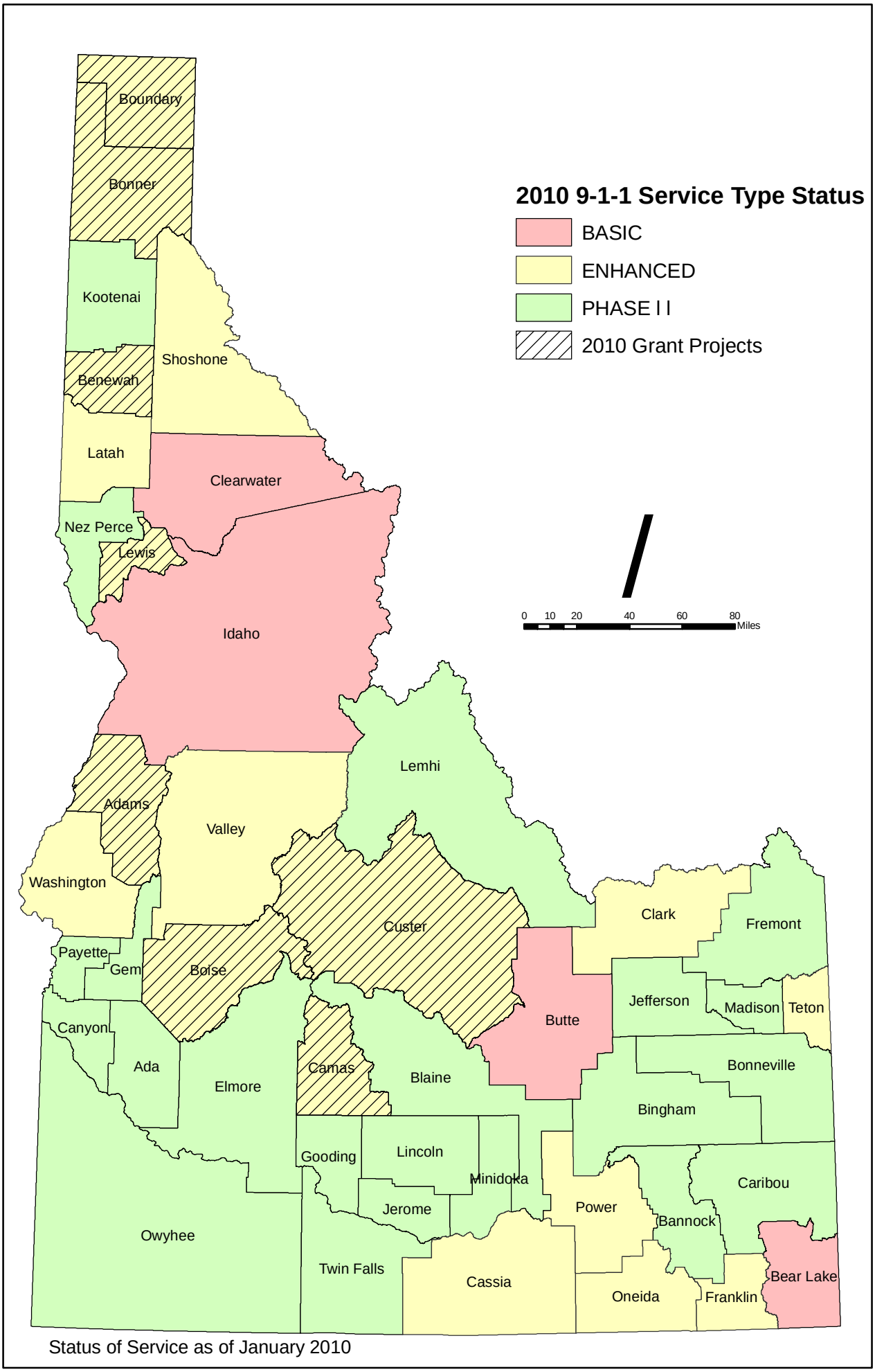


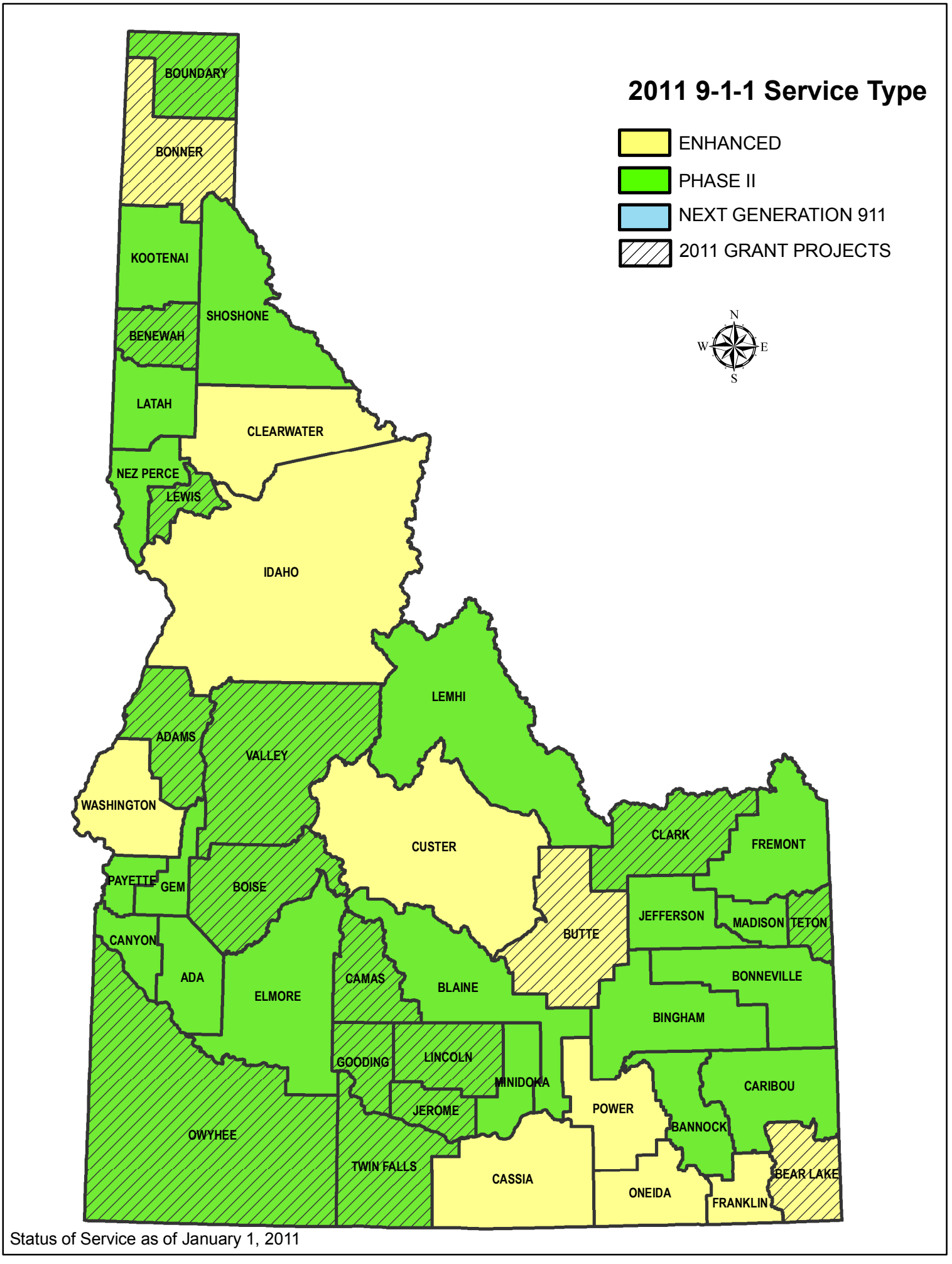
Status of Service as of February 5, 2008



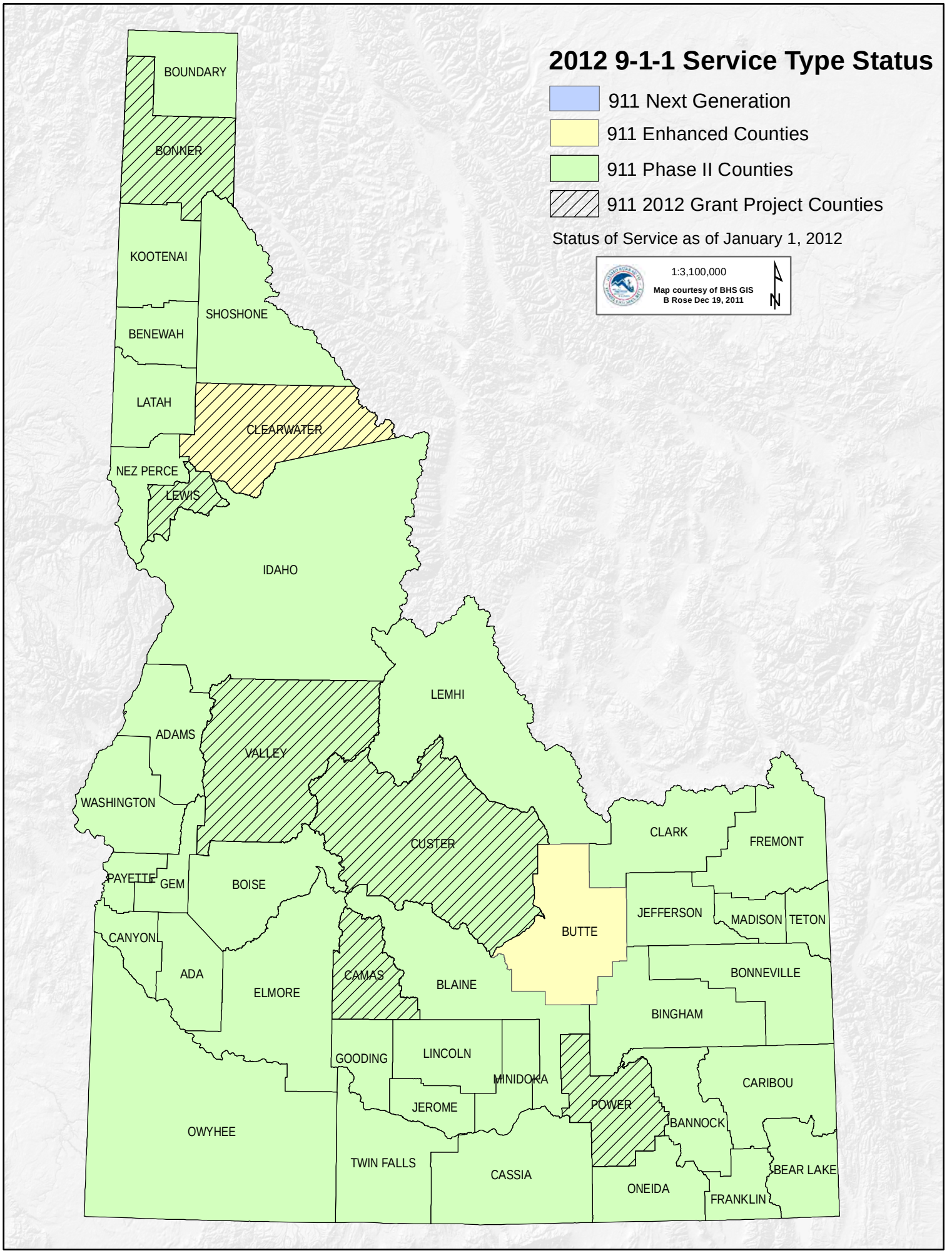
Status of Service as of November 2009

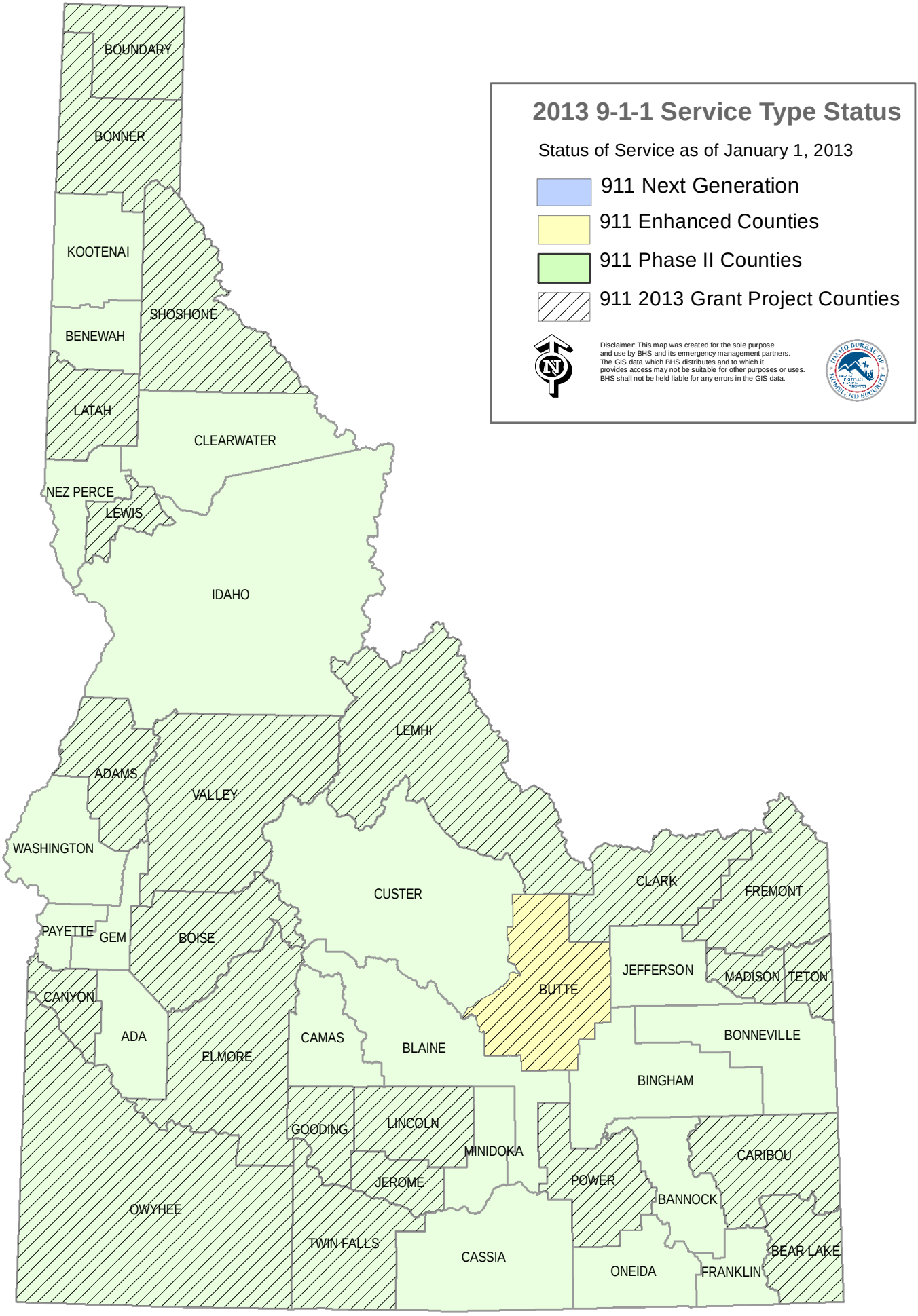


Status of Service as of January 2010



Status of Service as of January 1, 2011


2012 9-1-1 Service Type Status
911 Next Generation
911 Enhanced Counties
911 Phase II Counties
911 2012 Grant Project Counties
Status of Service as of January 1, 2012
1:3,100,000
Map courtesy of BHS GIS
B Rose Dec 19, 2011
N
BOUNDARY
BONNER
KOOTENAI
SHOSHONE
BENEWAH
LATAH
CLEARWATER
NEZ PERCE
LEWIS
IDAHO
LEMHI
ADAMS
VALLEY
WASHINGTON
CUSTER
CLARK
FREMONT
PAYETTE
GEM
BOISE
BUTTE
JEFFERSON
MADISON
TETON
CANYON
ADA
ELMORE
CAMAS
BLAINE
BONNEVILLE
BINGHAM
GOODING
LINCOLN
MINIDOKA
CARIBOU
POWER
JEROME
BANNOCK
OWYHEE
TWIN FALLS
CASSIA
ONEIDA
BEAR LAKE
FRANKLIN


2013 9-1-1 Service Type Status
Status of Service as of January 1, 2013
911 Next Generation
911 Enhanced Counties
911 Phase II Counties
911 2013 Grant Project Counties
Disclaimer: This map was created for the sole purpose and use by BHS and its emergency management partners. The GIS data which BHS distributes and to which it provides access may not be suitable for other purposes or uses. BHS shall not be held liable for any errors in the GIS data.
IDAHO BUREAU OF HOMELAND SECURITY
BOUNDARY
BONNER
KOOTENAI
SHOSHONE
BENEWAH
LATAH
CLEARWATER
NEZ PERCE
LEWIS
IDAHO
LEMHI
ADAMS
VALLEY
WASHINGTON
CUSTER
CLARK
FREMONT
PAYETTE
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ADA
ELMORE
CAMAS
BLAINE
BONNEVILLE
BINGHAM
GOODING
LINCOLN
MINIDOKA
CARIBOU
JEROME
POWER
BANNOCK
OWYHEE
TWIN FALLS
CASSIA
ONEIDA
FRANKLIN
BEAR LAKE