

State Communications Interoperability Plan

State of NEVADA



September 2010

Version 5

Executive Overview

Public safety interoperability for the state of Nevada may currently be characterized as “basic” in many areas, yet advanced capabilities also exist in portions of the state. At the basic level, radio caches are available and cross-band repeaters are used to connect different disciplines. In more sophisticated systems, a wide range of public services share a single proprietary network and have robust interoperable capabilities. Nevada has one designated Urban Area in southern Nevada. The Las Vegas/Southern Nevada Urban Area was certified to have met the interoperability requirements specified in Goal 1 of the National Emergency Communication Plan as documented in After Action Report *NECP-NVLV-AFTACTRPT-001-R0*.

The State and its political subdivisions have developed a Statewide Communications Interoperability Plan (SCIP) under the oversight of the Department of Public Safety, Division of Emergency Management (DEM). The DEM is the State Administrative Agency (SAA) responsible for the application and administration of the HSGP for the State.

The Nevada SCIP establishes the direction and priorities for planning, acquisition, deployment, training, and utilization of interoperable communications capabilities by public safety agencies within the state. Currently, Nevada’s focus is on recognizing and utilizing existing interoperability assets more effectively with priority on improving voice radio interconnectivity among those systems and users. The need for data interoperability across agencies is viewed as an increasing priority in Nevada.

Nevada continues to pursue a “Core Systems Strategy” for the effective and efficient application of resources towards improvement of interoperability. This strategy first emphasizes maintaining and improving capable resources existing across the state for interoperability in the 150MHz, 400MHz, 700MHz, and 800MHz bands of the radio spectrum. Subsequent efforts are intended to improve links across systems in those disparate bands, forming a network of systems to support the state’s wide range of radio communications needs.

Nevada recognizes that the great size, topography and diverse needs of the state makes “single resource” statewide solutions unlikely, and therefore, subscribes to the SAFECOM “system of systems” approach to achieve interoperability. A 2010 survey indicated that approximately 55% of existing equipment in Nevada is now at least upgradeable to P25 standards. The State requires that all radio equipment purchased after January 1, 2013 be capable of meeting P25 radio interface standards.

Further, Nevada’s public safety agencies recognize technical connections between radio systems are more mature than the operational capabilities needed to use those connections effectively. During 2010, the state adopted regional tactical interoperability plans (TICP’s) covering all regions of the state.

The community of public safety professionals in Nevada has a long-established record of cooperation and collaboration on the statewide challenges of radio interoperability. Over 20 representatives from state, local, and tribal agencies as well as private sector organizations have

participated in the Nevada Communications Steering Committee (NCSC) since its initial creation in December, 2002, and subsequent formalization in 2003. The stakeholders of the NCSC are committed to moving Nevada's public safety communications interoperability forward in efforts of achieving an increased level of prevention, protection, preparedness, response and recovery for the state, its residents and visitors collectively.

Table of Contents

Executive Overview	i
1 Introduction.....	1
2 Background	2
2.1 Organizational Background	2
2.2 Plan Development Process.....	2
2.3 Stakeholders.....	2
2.4 State Overview	3
2.5 Tribal Lands in Nevada.....	5
2.6 NIMS/Multi-Agency Coordination System (MACS).....	6
2.7 Regions/Jurisdictions	6
2.8 UASI Areas/TIC Plans.....	8
2.9 Participating Agencies and Points of Contact.....	10
2.10 Statewide Plan Point of Contact	10
2.11 Scope and Timeframe	10
2.11.1 Communications Interoperability - Short Term Gateways.....	11
2.11.1.1 Short Term	11
2.11.2 Communications Interoperability Core System Strategy	11
2.11.2.1 Long Term	11
3 Methodology	13
3.1 Oversight.....	14
3.2 Method for Multi-Jurisdictional/Multi-Disciplinary Input	14
3.3 Process for Local Input and Local Support.....	14
3.4 Strategy for Implementing all Components of the SCIP	14
3.5 Project Management	15
3.6 Contract Administration.....	15
4 Current Statewide Assessment	16
4.1 Dimensions of Interoperability	16
4.1.1 Southern Nevada iCall/iTac Interoperability Network	16
4.1.1.1 SNACC System Agencies.....	17
4.1.2 Northern Nevada Communications and Interoperability Efforts.....	17
4.1.3 Washoe County Regional Communications System (WCRCS).....	18
4.1.4 Nevada Shared Radio System (NSRS)	18
4.2 Nevada State Interoperability Executive Committee Governance Structure.....	18
4.3 Charter for the Nevada Communications Steering Committee (NCSC)	19
4.3.1 Responsibilities of the Nevada Communications Steering Committee	19

4.3.2	Members of the NCSC.....	20
4.3.3	Meeting Schedule.....	20
4.4	Multi-Jurisdictional/Multi-Discipline Agreements.....	20
4.5	Updates to the SCIP	20
4.6	Technology	20
	Technology Deliverables	Error! Bookmark not defined.
4.6.1	Support for Legacy Systems	24
4.6.2	Migration Plan	24
4.6.3	Process for New Purchase Compliance	24
4.7	Standard Operating Procedures.....	24
4.7.1	Assessment of Current Local, Regional and State SOPs	25
4.7.2	Process to Develop, Manage, Upgrade and Communicate SOPs	25
4.7.3	Agencies Included in the Development SOPs	25
4.7.4	Compliance of SOPs with NIMS	26
4.8	Training and Exercise Plan	26
4.8.1	Process to Develop, Maintain, Upgrade and Coordinate Training and Exercise Plans.....	26
4.8.2	Process for Offering/Requiring Training, Exercises and Certifications	27
4.8.3	Cross-Disciplinary Training.....	27
4.9	Usage.....	28
4.9.1	Coverage and Operability	28
5	Strategy	30
5.1	Mission.....	30
5.2	Vision.....	31
5.3	Statement of Principles NCSC.....	31
5.4	Goals and Objectives	31
5.4.1	Governance	32
5.4.2	Standard Operating Procedures (SOP).....	33
5.4.3	Technology	33
5.4.4	Training & Exercise.....	34
5.4.5	Usage.....	35
5.5	Assess & Measure.....	35
5.6	Coordination with Neighboring States.....	35
5.7	Addressing Data and Voice Interoperability.....	36
5.8	Catastrophic Loss of Communications Assets.....	37
5.9	Strategy for Addressing Transportation.....	38
5.10	Strategic Technology Reserve (STR)	38
5.10.1	Cache of communications equipment.....	38
5.10.2	Pre-identified procurement vehicles	38
	Nevada has pre-identified and established various methods for procurement that include, but are not limited to:.....	38
5.11	Addressing Local and Tribal Government Needs.....	39
5.12	National Incident Management System (NIMS) Compliance	39
5.13	Review and Update Process.....	40

6	Implementation	41
6.1	Performance Measures.....	41
6.2	Educating Policy Makers and Practitioners	41
6.3	Roles and Opportunities for Involvement.....	41
6.4	Identify, Develop and Oversee Operational Requirements, SOPs, Training, Technical Solutions and Short and Long Term Funding.....	42
6.5	POC Responsible for Plan Implementation	43
6.6	Critical Success Factors	43
7	Funding	43
7.1	Process for Identifying Ongoing Funding Sources	43
7.2	Short Term Funding	43
7.3	Long Term Funding	43
8	PSIC Requirements	44
8.1	PSIC Requirement 1 [Addressing Criteria 11.1]	44
8.2	PSIC Requirement 2 [Addressing Criteria 11.2]	44
8.3	PSIC Requirement 3 [Addressing Criteria 11.3]	44
8.4	PSIC Requirement 4 [Addressing Criteria 11.4]	45
9	Closing.....	455
Appendix A NCSC Members		46
Appendix B Southern Nevada iCall/iTac Interoperability Network.....		47
Appendix C Participating SCIP Development Stakeholders		48
Appendix D Glossary of Terms and Acronyms		51

Table of Figures

Figure 2-1 Base Highway Map of Nevada	4
Figure 2-2 Indian Reservations and Colonies in Nevada.....	5
Figure 2-3 UASI Area.....	9
Figure 2-4 Core System Strategy.....	12
Figure 4-1 Governance Organization Chart.....	19
Figure 5-1 SAFECOM Continuum.....	30
Figure 5-2 Cooperating States with Nevada	36
Figure C-1 iCall/iTac Interoperability Network Map	47

List of Tables

Table 2-1 Jurisdictions/Agencies (List of Emergency Managers).....	7
Table 2-2 TIC Plan Information	10
Table 4-1 Radio Caches	21
Table 4-2 Interoperability Repeaters in Operation and Programmed Channels	21
Table 4-3 Shared System/Types and Agencies.....	21
Table 4-4 Gateways and Agencies.....	22
Table 4-5 POCs for Maintenance/Service of Core Systems	23
Table 4-6 Major Events in Nevada	28
Table 4-7 Large Conventions in Nevada	29
Table 4-8 Nevada Communication and Interoperability Plans	29
Table 6-1 Entities, Roles, and Responsibilities	42

1 Introduction

The Nevada Statewide Communications Interoperability Plan (SCIP) is intended to establish near and long term guidance for improved public safety *communications interoperability*. The scope of the plan extends to all organizations providing public safety services within the State of Nevada. Nevada defines interoperability as:

“Interoperability is the ability of appropriate officials and personnel to effectively communicate by radio across jurisdictions and with each other, when authorized, as needed and in real time.”

This SCIP further emphasizes efforts toward improved multi-jurisdiction/multi-discipline interoperability throughout the state, rather than lists of agency-specific or role-specific steps.

Reporting to the Congress, the 9/11 Commission cited public safety communications interoperability as a widespread problem: *“The inability to communicate was a critical element at World Trade Center, Pentagon, and Somerset County, Pennsylvania, crash sites, where multiple agencies, multiple jurisdictions responded. The occurrence of this problem at three very different sites is strong evidence that compatible and adequate communications among public safety organizations at the local, state, and federal level remains an important problem.”*

Nevada’s public safety professionals acknowledged the existence of similar concerns within the state. Consequently, the Nevada Communications Steering Committee (NCSC) was formalized in 2003 by way of an executive order of the Governor of the State of Nevada. The NCSC also serves as an advisory committee to the Nevada Commission on Homeland Security, and provides a broad range of input on issues of communications interoperability.

In this post-9/11 era, the documented and compelling need to improve the inter-working of public safety personnel (to include hospitals and EMS providers) through better communication, and specifically through better *communications interoperability* is recognized and thereby acknowledged as paramount in improving the safety of both the public and the emergency response providers.

In 2005, the NCSC presented the first Nevada Statewide Communications Interoperability Plan to the state’s Commission on Homeland Security. That plan identified a “Core Systems Strategy” as a foundation for improving interoperability, and leveraging installed assets to provide for more expedient improvements.

With DHS SAFECOM assistance, the NCSC revised and improved the SCIP in 2006 and again in 2008. This document incorporates relevant portions of the previous versions of the SCIP and will supersede all previous versions, as approved.

2 Background

2.1 Organizational Background

While efforts toward improving Nevada public safety interoperability goes back nearly two decades, the current effort began in December, 2002, at the first Nevada Government Communication Conference¹. From the 125 attendees, two common themes emerged: 1) Nevada needed a forum for statewide discussion of communication issues; and, 2) Nevada should develop a communications interoperability plan. Noting these, the Governor directed the State Chief Information Officer (CIO) to assemble a representative committee and develop a plan. The NCSC² was created by executive order in 2003, and began working to improve Nevada public safety radio interoperability.

Shortly after the creation of the NCSC, the 2003 Nevada Legislature specified in law the need for a statewide interoperability plan by October 1, 2005³. The statute charged the Nevada Commission on Homeland Security (NCHS) with the development of that plan. The Commission requested that the NCSC serve as the oversight entity for the creation of Nevada's SCIP and serve as an advisory body to the Commission on all matters related to communications interoperability.

2.2 Plan Development Process

The Nevada SCIP process is based on participation and input of a broadly representative steering committee through working with consultants, reviewing and acquiring feedback, adapting results and devising a plan. NCSC representatives (see appendix B) are from fire, law enforcement, military, communication industry, and medical/health disciplines, Non-Governmental Organizations (NGOs), and private firms. They come from urban, suburban and rural areas, and represent city, county, state, federal, tribal and private agencies. NCSC meetings are held bi-monthly within the provisions of Nevada's open-meeting laws. The Nevada Division of Emergency Management provides administrative support.

2.3 Stakeholders

The project stakeholders are individuals, groups, or organizations that are actively involved in the project, are directly affected by its outcome, or can influence its outcome (See **Error! Reference source not found.**). A stakeholder has an interest in the project based on expectation of value or benefit to be received.

¹ Nevada Government Communication Conference; aggregated raw comments and summary conclusions. December 3, 2002

² More information available at: <http://homelandsecurity.nv.gov/NCSC.htm>.

³ AB441 originally called for plan implementation July 1, 2005, however this has been modified by SB194 in the 2005 Session to October 1, 2005

2.4 State Overview

Permanent Resident Population (US Census estimate 2006-2008)	2,546,235
Nevada: Land area in 2000 (square miles)	109,826
Average number of Permanent Residents per square mile (US Census 2000)	18
Number of Annual Visitors	>50,000,000

Note: *The Las Vegas metropolitan alone area hosts more than 44 million annual visitors.*

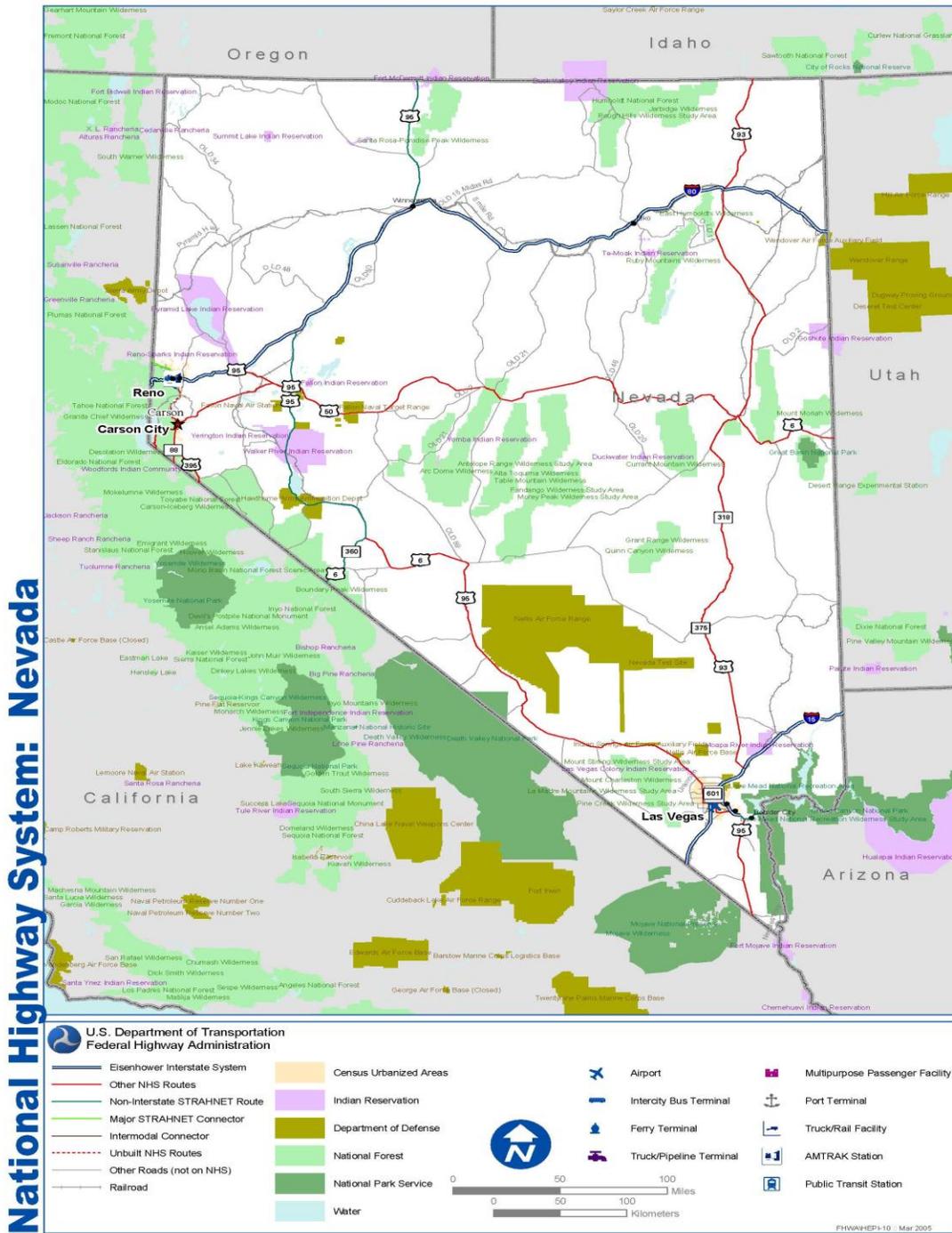
Nevada has diverse climate, due partly to variations in latitude and elevation. Winters are coldest in the northeast, with average January temperature of ~23°F at Elko, and ~43°F at Las Vegas. The July average is ~70°F at Elko and ~90° F at Las Vegas.

Nevada is the driest U.S. state, with average annual precipitation (rain and melted snow) of ~9 inches in Elko and <4 inches in the Las Vegas area. Much of the precipitation falls as winter snow, with the spring thaw contributing to streams and creeks flowing from the mountains.

Two major interstates cross Nevada: Interstate-80 east-west in the northern third of the state, traversing the Reno/Sparks area, and I-15 in southern Nevada running through Las Vegas from northeast to southwest. These two interstates traverse the most densely populated areas of the state (see Figure 2-1).

About 80% of Nevada's land is under federal government control for BLM or military use. The central portion of the state contains the nation's nuclear testing grounds, and a live-weapons range used by various branches of the US military for aerial and air-to-ground combat training.

Nevada Communications Interoperability Plan



2.5 Tribal Lands in Nevada

Nevada includes 28 federally recognized Indian Tribes located throughout the state. Prior to statehood, the Washoe, Paiute and Shoshone peoples occupied Nevada. Today, a relatively small amount of Nevada is reserved for the 28 tribes and their members. The amount of tribal acreage in Nevada is estimated at 1,161,865 acres. This amount is equivalent to .6 percent of the state's land area. The borders of many reservations overlap state or county borders, adding unique complexities to land administration efforts (shown in Figure 21).

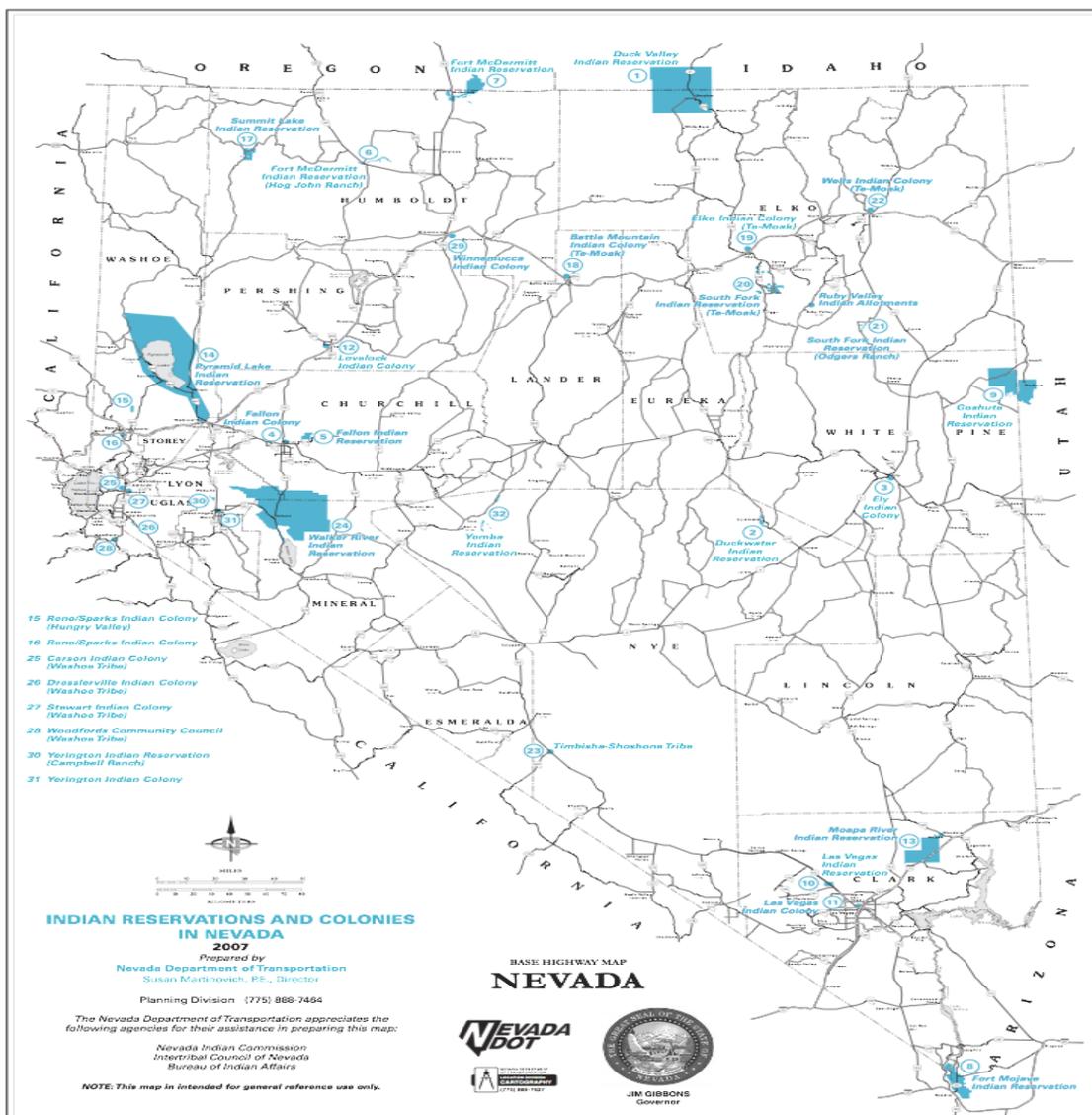


Figure 2-2 Indian Reservations and Colonies in Nevada

2.6 NIMS/Multi-Agency Coordination System (MACS)

During the 2005 Legislative Session of the Nevada Legislature, a law was passed requiring that the state and each political subdivision adopt any national system for emergency response. Specifically, the language reads as follows:

NRS 239C.310 Adoption of national system of emergency response.

1. The State and each political subdivision shall:

(a) Adopt any national system that is required as a condition to the receipt of money from the Federal Government by the United States Department of Homeland Security pursuant to federal law in preparation for, prevention of, detection of, mitigation of, response to and recovery from a domestic incident, including, without limitation, an act of terrorism.

(b) Submit to the Division documentation evidencing that the State or political subdivision has adopted the national system.

2. The Division shall submit on a quarterly basis documentation to the Commission evidencing the compliance of this State and each political subdivision with the provisions of paragraph (a) of subsection 1.

(Added to NRS by [2005, 1533](#))

The state has placed the requirement of NIMS compliance on each of the seventeen counties, as well as incorporated cities, as a condition of funding and has required each of them to document evidence of their NIMS compliance through use of the NIMSCAST program. As is required of the Department of Public Safety, Division of Emergency Management, this information is reported to the Commission on Homeland Security.

All first responder agencies in Nevada are trained to operate within the parameters of the National Incident Management System (NIMS). Principles of the NIMS and Incident Command System (ICS) are integrated into emergency responses and recovery functions as well as planned events in Nevada. Nevada continues to provide training and exercises for sustaining NIMS compliance with public officials and the emergency first responder communities.

Further, Nevada agencies have adopted the use of plain language in interoperable communications during emergencies and disasters. Most of Nevada's first responders have completed ICS-100, ICS-200, IS -700 and IS-800 training, and many have also completed ICS-300 and ICS-400 courses.

2.7 Regions/Jurisdictions

Nevada organizes several of its public services, such as transportation and highway patrol services, into regions. This is primarily for administrative purposes. However, operational organization is most often coordinated with each of Nevada's counties.

Nevada has no formal regional, multi-county emergency services organizations for the purpose of operations. Coordination of multi-county regionalized services is reliant upon county-to-county cooperation. Nevada's statewide emergency management officials coordinate response across jurisdictional boundaries. Each of the seventeen counties in Nevada has an emergency manager, sheriff's office providing police services, and a fire service for fires and emergency medical needs. Several counties also contain chartered municipalities with municipal emergency management, police and fire/EMS departments.

Nevada Communications Interoperability Plan

Table 2-1 Jurisdictions/Agencies (List of Emergency Managers)

Jurisdiction	Agency	Name	Title	Phone
State	Department of Public Safety, Division of Emergency Management	Frank Siracusa	Chief	(775)687-0300
Local	Boulder City Emergency Management	Dean Molburg	Director	(702)293-9228
	Carson City Office of Emergency Management	Stacey Giomi	Fire Chief	(775)887-2210
	Churchill County Office of Emergency Management	Mert Mickelson	Director	(775)423-4188
	Clark County Office of Emergency Management and Office of Homeland Security	Irene Navis	Director	(702)455-5710
	Douglas County Emergency Operations	Richard Mirgon	Director	(775)782-9977
	Elko County Office of Emergency Management	William Z. Webb	Director	(775)738-8046
	Esmeralda County Office of Emergency Management	Harriet Ealey	Director	(775)485-3757
	Eureka County Office of Emergency Management	Ron Damele	Director of Public Works	(775)237-5372
	City of Fallon Emergency Management	Steven Endacott	Director	(775)423-1345
	City of Henderson Emergency Management	Michael S. Cyphers	Coordinator	(702)267-2222
	Humboldt County Office of Emergency Management	Edwin Kilgore	County Sheriff	(775)623-6419
	Lander County Office of Emergency Management	Ron Unger	Sheriff/Fire Chief	(775)635-1100
	City of Las Vegas Emergency Management	Timothy McAndrew	Emergency Manager	(702)383-2888
	Lincoln County Office of Emergency Management	Margie Gunn	Director	(775)728-4431
	Lyon County Office of Emergency Management	Jeffrey A.. Page	Coordinator	(775)463-6551 x10

Nevada Communications Interoperability Plan

Jurisdiction	Agency	Name	Title	Phone
	City of Mesquite Emergency Management	David Petersen	Deputy Chief	(702)346-2690 x295
	Mineral County Office of Emergency Management	Craig Nixon	Fire Chief	(775)945-2497
	City of North Las Vegas Emergency Management	Patricia Loft	Coordinator	(702)633-1125
	Nye County Emergency Services	Brent Jones	Director	(775)751-4278
	Pershing County Office of Emergency Management	Richard Wagner	Director	(775)273-7995 x262
	City of Reno Office of Emergency Management	Marty Scheuerman	Div. Fire Chief	(775)334-2300
	City of Sparks Department of Public Works	Gary Dunn	Emergency Manager	(775)353-2358
	Storey County Office of Emergency Management	Joe Curtis	Director	(775)847-0954
	Washoe County Division of Emergency Management and Homeland Security	Aaron A. Kenneston	Manager	(775)337-5898
	City of West Wendover Emergency Management	Jeff Knudtson	Fire Chief	(775)664-2274
	White Pine County Office of Emergency Management	Russell W. Peacock	Director	(775)289-8406
Tribal	Las Vegas Paiute Police	Don Belcher		702-471-0844
Non-Governmental	Nevada Hospital Association	Angela Krutsinger		775-827-0184
	Nevada Power	Mark Pallans		702-657-4205

2.8 UASI Areas/TIC Plans

There is one designated UASI jurisdiction within the state; the Greater Las Vegas Metropolitan Area, or Clark County (See Figure 2-3). Due to the sensitive nature of information contained within the Tactical Interoperable Communications (TIC) Plan, please see Table 2-2 for contact information.

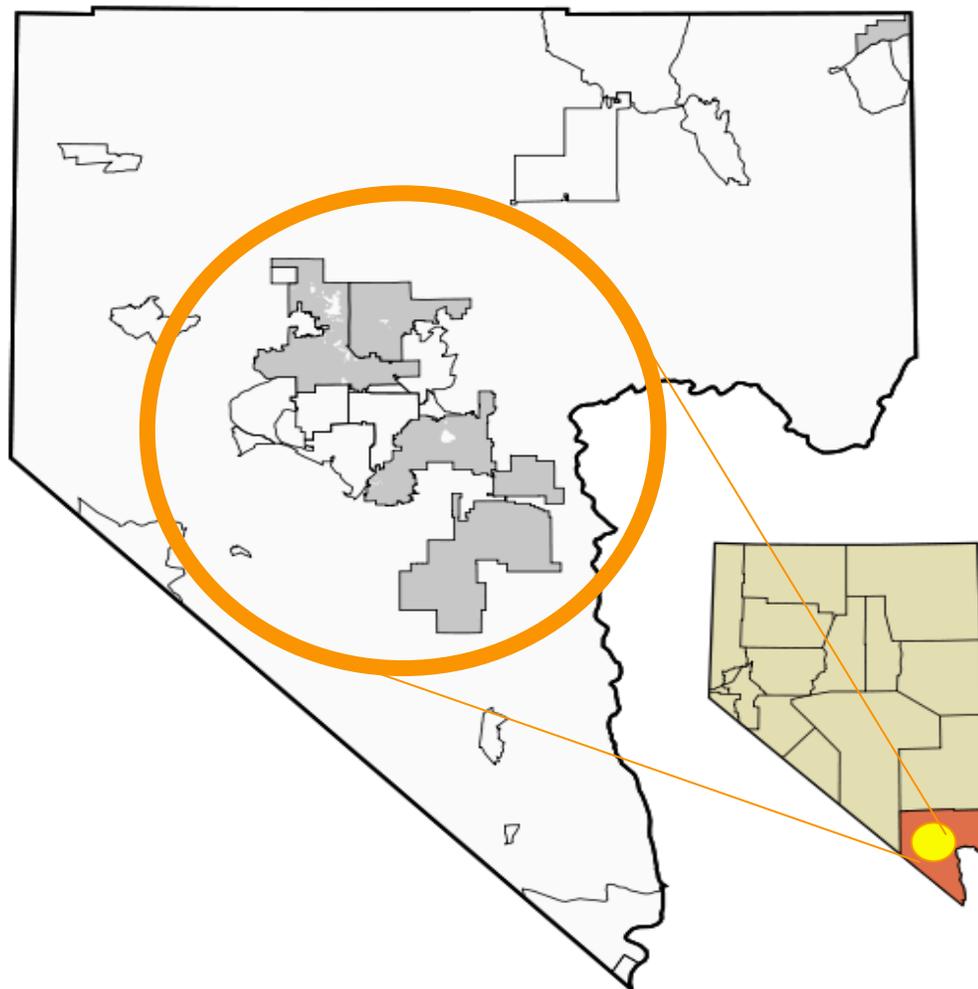


Figure 2-3 UASI Area

The Las Vegas Urban Area TIC plan incorporates the 5-talk path iCall/iTac repeater network in Clark County. This network connects the legacy Las Vegas Metropolitan Police 150MHz radio network to the 27-agency Southern Nevada Area Communications Council (SNACC) 800MHz network. The iCall talk path is county-wide, and the four regional iTac talk paths are accessible in specific regions of the county.

The Las Vegas Urban Area attained NECP Goal 1 accomplishment following and evaluated event on December 31/January 1, 2010

Lessons learned in Las Vegas can benefit the rest of the state through sustaining the major strengths recognized in the urban area and planning for improvements requiring corrective actions. The major strengths identified included: Excellent working relationships among all stakeholders involved in planning and conducting the exercise; Participants demonstrated familiarity with NIMS and ICS throughout the exercise; and the “Comm Unit” leaders demonstrated thorough knowledge of the requirements of the position and the ability to carry out the duties. Many of the lessons learned in the Las Vegas Urban Area, and subsequent

development or revisions to policies, procedures and techniques utilized by officials in the Urban Area can be shared with other communities throughout the state to assist them in the development of their policies and procedures, as well as encourage standardization of policies and procedures where applicable.

Table 2-2 TIC Plan Information

Area	Regions / Jurisdictions	TICP Title/ Completion Date	POC Name	POC Email
Las Vegas, NV Urban Area	City of Las Vegas Unincorporated Clark County, Nye County	Las Vegas, Nevada Urban Area Tactical Interoperable Communications Plan	Irene Navis, Director of Emergency Management and Homeland Security	iln@co.clark.nv.us
Northeast NV	Elko, White Pine, Lincoln, Eureka, Lander, Humboldt, Nye, Esmeralda Counties	Northeast Nevada Regional Tactical Interoperability Plan	Bob Wideman, SWIC	bwideman@dps.state. nv.us
Northwest NV	Washoe Carson City, Douglas, Lyon, Pershing, Churchill, Mineral, Storey Counties	Northwest NV Regional Tactical Interoperability Plan	Bob Wideman, SWIC	bwideman@dps.state. nv.us

2.9 Participating Agencies and Points of Contact

Participating agencies and POCs that helped in the development of the SCIP can be found in **Error! Reference source not found.** The development of the SCIP was derived through numerous meeting and specific focus groups with appropriate expertise relative to existing and planned systems integration.

2.10 Statewide Plan Point of Contact

Name: Robert Wideman
 Title: Statewide Interoperability Coordinator
 Agency: Nevada Department of Public Safety, Emergency Management Division
 Phone: (775)684-0444
 E-mail: bwideman@dps.state.nv.us

2.11 Scope and Timeframe

The scope and timeframe of this plan are intended to achieve statewide communications interoperability to the fullest extent possible by 2013 through utilization and maintenance of existing systems coupled with the integration of newer systems and technology. This plan will be funded through leveraging of other federal, state, local, tribal and private funding sources.

2.11.1 Communications Interoperability - Short Term Gateways

The current statewide communications and interoperability environment is very disparate outside of the core systems that currently exist. This is primarily the case in the rural counties where ability to talk between their own disciplines is limited or does not exist. This environment exists primarily as a result of inadequate equipment, and lack of proper training on existing equipment and development of standard operating procedures.

2.11.1.1 Short Term

The two main components of the Nevada SCIP are radio systems generally in the 700/800 MHz band and systems in the 150 MHz band (mainly in the rural areas). Our short-term objective is to link these two bands with gateway connections on mutual aid channels. Some of these gateways already exist, and statewide expansion is currently underway.

2.11.2 Communications Interoperability Core System Strategy

The Core System Strategy capitalizes on communications systems investments made by each of the core system operators in favor of all Nevada citizens. By connecting these four major trunked systems, a single “virtual” system is created. In turn, as each one of the four major, or other accepted systems, links to their principle mutual aid partners operating on smaller conventional systems, these mutual aid partners will have access to, and through the combined core systems to other first responders.

2.11.2.1 Long Term

In the long term, this initiative while providing an immediate improvement in interoperability between public safety users on the four major systems, will also offer opportunity for improved interoperability with conventional system operators across the State. Leveraging the sophistication and coverage of these large trunked systems offers immediate benefits to emergency responders, and implements the SAFECOM recommendation of constructing a “system of systems” (see Figure 2-4).

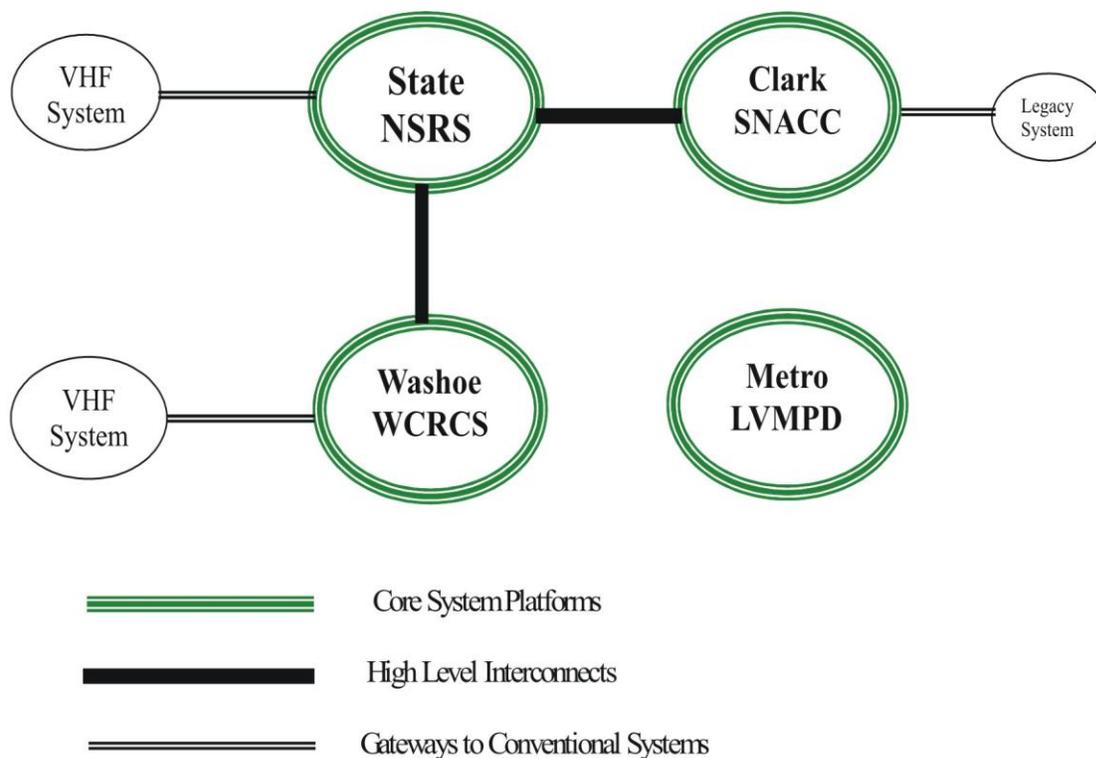


Figure 2-4 Core System Strategy

SNACC – *Southern Nevada Area Communication Council*
WCRCS – *Washoe County Regional Communication System*

NSRS – *Nevada Shared Radio System*
LVMPD – *Las Vegas Metropolitan Police*

3 Methodology

The NCSC has been made up of representatives from many public safety disciplines since its inception in 2003. The body holds monthly public meetings involving representatives from federal, state, local, and tribal governments, NGOs and private entities.

In 2004, the NCSC commissioned a survey and inventory of communications capabilities and assets for public safety disciplines throughout the state. The Committee used results of that survey in the development of an initial statewide communications interoperability plan (version 1).

The NCSC, with U.S. Department of Homeland Security SAFECOM assistance, developed the initial statewide interoperable communications plan in 2005. Representatives from federal, state, local, tribal, and private entities participated in those meetings and in revising and refining the version 2 plan. Version 3 was adopted in 2008. Version 4 was drafted and circulated but not formally adopted.

The NCSC will continue to use its bi-monthly public meetings to sustain involvement of all levels of government and public safety disciplines. The NCSC reports each quarter to the Nevada Commission on Homeland Security, providing continued opportunity for further review and input from various disciplines and entities throughout the state.

The first TICP in Nevada was developed for the Las Vegas urban area. That plan was developed explicitly to rely on three of Nevada's SCIP core systems now operating in that urban area. In 2010, additional TICP's were developed and adopted covering the Northwest Nevada Region and the Northeast Nevada Region. All areas of the state are now covered by an existing regional TICP. Further SCIP refinement will draw on lessons learned in the regional TICP's.

Interoperability needs of non-governmental organizations (such as utilities and health care) and tribal entities have been considered in this process and represented by their participation in the NCSC. The Nevada Core Systems Strategy considers interoperability needs via the participation of users in the large, multi-entity shared core systems. The statewide, southern and northern Nevada shared core systems, for example, serve approximately 60 different agencies, including federal, state, local and tribal entities, as well as health care, public works, and utilities.

The NCSC collaborates with the Nevada Department of Public Safety, Division of Emergency Management (DEM) to ensure grant funds are spent in support of the SCIP goals and objectives. The NCSC ranks priorities and recommends solutions to further statewide interoperability, and the DEM, the State Administrative Agency (SAA) ensures approved funding allocations conform to those priorities.

3.1 Oversight

By executive order of the Governor of the State of Nevada, the Nevada Communications Steering Committee (NCSC) was created in 2003. The NCSC is a multi-discipline multi-jurisdictional body. The NCSC is an advisory committee to the Nevada Commission on Homeland Security and acts as a representational body for the purpose of gathering input necessary to address communications interoperability. The NCSC agrees with the 9/11 Commission's findings as described above and have taken steps over the past several years to develop methods to solve interoperable communications problems within the state.

Further, the NCHS acts as the review body for proposed expenditure of Homeland Security Grant Program (HSGP) funds and makes its recommendations to the Governor for the final approval and distribution of funding. The Nevada Division of Emergency Management is the designated State Administrative Agency (SAA) to the federal government for purpose of grant administration. The NCSC has been delegated responsibility for oversight of all communications-related issues. The NCSC will actively direct and monitor progress at regularly scheduled monthly meetings, and will report to the NCHS at their quarterly meetings or as otherwise requested. The NCSC may use specialized subcommittees, as used previously and successfully, for assignments and tasks comprising this project.

3.2 Method for Multi-Jurisdictional/Multi-Disciplinary Input

As described above, multi-jurisdictional/multi-disciplinary input is acquired through membership of the NCSC as the NCSC is comprised of representatives of state, local, tribal and private individuals from various disciplines.

3.3 Process for Local Input and Local Support

As stated earlier, there have been surveys provided to local governments seeking their input as it would relate to the development of the SCIP and its revisions over the years. Additionally, local entities are provided many other venues to provide input through membership of different committees and working groups as well as participation in meetings posted under the Nevada open meeting laws. The state recognizes that it is essential to ensure continued input from local entities and to build local support for the success of any statewide interoperability initiatives. The statewide interoperability coordinator meets and corresponds with the local entities on a regular basis. The statewide interoperability coordinator also provides the local entities with a single point of contact for all matters pertaining to any interoperable communications issues that exist or may arise within each jurisdiction.

3.4 Strategy for Implementing all Components of the SCIP

Information pertaining to this plan will initially be provided to all jurisdictions within the state through the state's Department of Public Safety via letter and email. Subsequent and ongoing communication will be the sole responsibility of the state interoperability coordinator. The interoperability coordinator will further be responsible for overseeing the full implementation of

this plan as well as serve as the state's coordinator for all information obtained through committees and contractors addressing statewide communications interoperability issues.

3.5 Project Management

Nevada state policy requires projects to be managed by qualified state staff. A Certified Project Manager will manage projects under this plan using Professional Project Management methodologies. The nationally accepted Project Management Body of Knowledge (PMBOK) is the Nevada State guideline for best practices. The state is committed to project schedule accuracy and conformity.

The following outlines the minimum project management tools that will be required for each project.

- Project schedules including tasks, activities, activity duration, sequencing and dependencies
- Roles and Responsibilities
- Project work plan for each deliverable, including a work breakdown schedule
- Completion date for each task
- Identified Project Milestones
- Entrance and exit criteria for each milestone
- Traceability Matrix from RFP to project deliverables for quality control
- Schedule performance tracking reports and face to face meetings
- Overall project status and reporting to the NCSC and the NCHS

Additionally, as part of each contract with a contractor or consultant, designation of a project manager is required. They will be held contractually accountable for the same methodology.

3.6 Contract Administration

An experienced and qualified governmental contract administrator will be used for each contract that is approved and executed. The same or differing contract administrators may be designated by the NCSC. Standard and authorized procurement processes will be employed, in compliance with Nevada Revised Statutes and the Nevada Administrative Code, as applicable. This process will start with a competitive Request for Proposal (RFP) and will result in a legally reviewed and approved contract. Included as part of the contract process, timelines, subtasks, progress payment schedules and project completion/acceptance processes will be established.

4 Current Statewide Assessment

4.1 Dimensions of Interoperability

Interoperability is recognized by Nevada as more than simply a question of technology. The state subscribes to the concept of an *Interoperability Continuum* as developed by SAFECOM, with dimensions of *Governance, Standard Operating Procedures, Technology and Training & Exercises* as all significant factors in interoperable communications. Nevada uses the SAFECOM dimensions to assess, sort, and rank interoperability needs, capabilities and solutions.

4.1.1 Southern Nevada iCall/iTac Interoperability Network

Southern Nevada public safety agencies operate primarily on two radio networks, the 150MHz conventional LVMPD radio system and the Southern Nevada Area Communications Council (SNACC) 800MHz trunked radio system. Radios of both networks can communicate with each other through an interoperability system across Clark County, known as the iCall/iTac Repeater Network.

Both SNACC and the Las Vegas Metropolitan Police Department (LVMPD) user radios are programmed with five interoperable talk groups: iCall, iTac1, iTac2, iTac3 & iTac4.

The iCall talk group covers most of Clark County as a command and control connection for leaders of emergency services to coordinate multi-agency response to incidents. The LVMPD monitors iCall at all times. Only the iCall talk group is monitored by area dispatch centers.

The iTac talk groups are localized to four regions of the county for emergency services to talk to one another at the scene of an incident. See Appendix A.

iCall - designed to work county-wide

iTac #1 - designed to work best in the east and southwest areas of Clark County.

iTac #2 - designed to work best towards the south of the urban Las Vegas area.

iTac #3 - designed to work best in the northwest and southern rural parts of Clark County.

iTac #4 - designed to work best in the urban Las Vegas/Henderson/Boulder City area.

Radio traffic on iCall/iTac talk groups follows National Incident Management System (NIMS) procedures, and should always use plain language and include the agency name before call signs.

Examples: *1 Charlie 12* becomes *Metro 1 Charlie 12*, or *Henderson 1 Charlie 12*

This also applies to calling dispatch centers. *Control* becomes *Metro Dispatch*, or *Fire Dispatch*.

4.1.1.1 SNACC System Agencies

CLARK COUNTY

- Department of Aviation
 - McCarran Airport, NLV Airport, Henderson Airport
- Clark County Park Police
- Clark County Animal Control
- Clark County Code Enforcement
- Clark County Fire Department
- Clark County Henderson Justice Court Marshals

CITY OF LAS VEGAS

- Las Vegas Detention and Enforcement
- Las Vegas Parking Enforcement
- Las Vegas Animal Control
- Las Vegas Fire & Rescue
- Las Vegas Water Pollution Control Facility
- Municipal Court Marshals

CITY OF NORTH LAS VEGAS

- NLV Fire Department
- NLV Police and Correction (Jail)
- NLV Animal Control

LAS VEGAS VALLEY WATER DISTRICT

- All Departments and Divisions

CLARK COUNTY WATER RECLAMATION DISTRICT

- All Departments and Divisions

CLARK COUNTY SCHOOL DISTRICT

- School District Police Department

CITY OF HENDERSON

- Henderson Police Department
- Henderson Fire Department
- Henderson Animal Control Department
- Henderson Marshals (December 2006)

PAIUTE INDIAN TRIBE

- Tribal Police Department

BOULDER CITY (August 2007)

- Boulder City Fire Department
- Boulder City Police Department

STATE OF NEVADA

- Gaming Control Board

4.1.2 Northern Nevada Communications and Interoperability Efforts

Currently there are two 800 MHz radios systems in Northern Nevada. One is operated by the Washoe County Regional Communications System (WCRCS). The second is operated by the Nevada Shared Radio System (NSRS). The Washoe County system covers the Northern Urban

Area from Reno, Sparks and incorporated areas. The state system has coverage throughout the entire state including Las Vegas, Reno, Sparks, Carson City and other municipalities.

Rural communications consist of a basic level of interoperability among first responders based on shared frequencies and channels. The majority of communications resources in rural communities are based upon the VHF frequency band (150 MHz). The equipment is conventional and non-trunked.

Additionally, a regional consortium of rural counties has been established. The Northern Nevada Area Communications Consortium (NNACC) has been established to further join communications, interoperability efforts, and capabilities between rural counties. Currently 6 counties have signed inter-local agreements regarding interoperable communications.

4.1.3 Washoe County Regional Communications System (WCRCS)

See above comments under “Northern Nevada Communications and Interoperability Efforts.”

4.1.4 Nevada Shared Radio System (NSRS)

See above comments under “Northern Nevada Communications and Interoperability Efforts.”

4.2 Nevada State Interoperability Executive Committee Governance Structure

By executive order of the Governor of the State of Nevada, the Nevada Communications Steering Committee (NCSC) was created in 2003. The NCSC is a multi-discipline multi-jurisdictional body. The NCSC is an advisory committee to the Nevada Commission on Homeland Security and acts as a representational body to bring together the input to address communications interoperability.

NCSC information, charter, by-laws and membership rosters are available at the following location:

The NCSC web site is: <http://homelandsecurity.nv.gov/NCSC.htm>

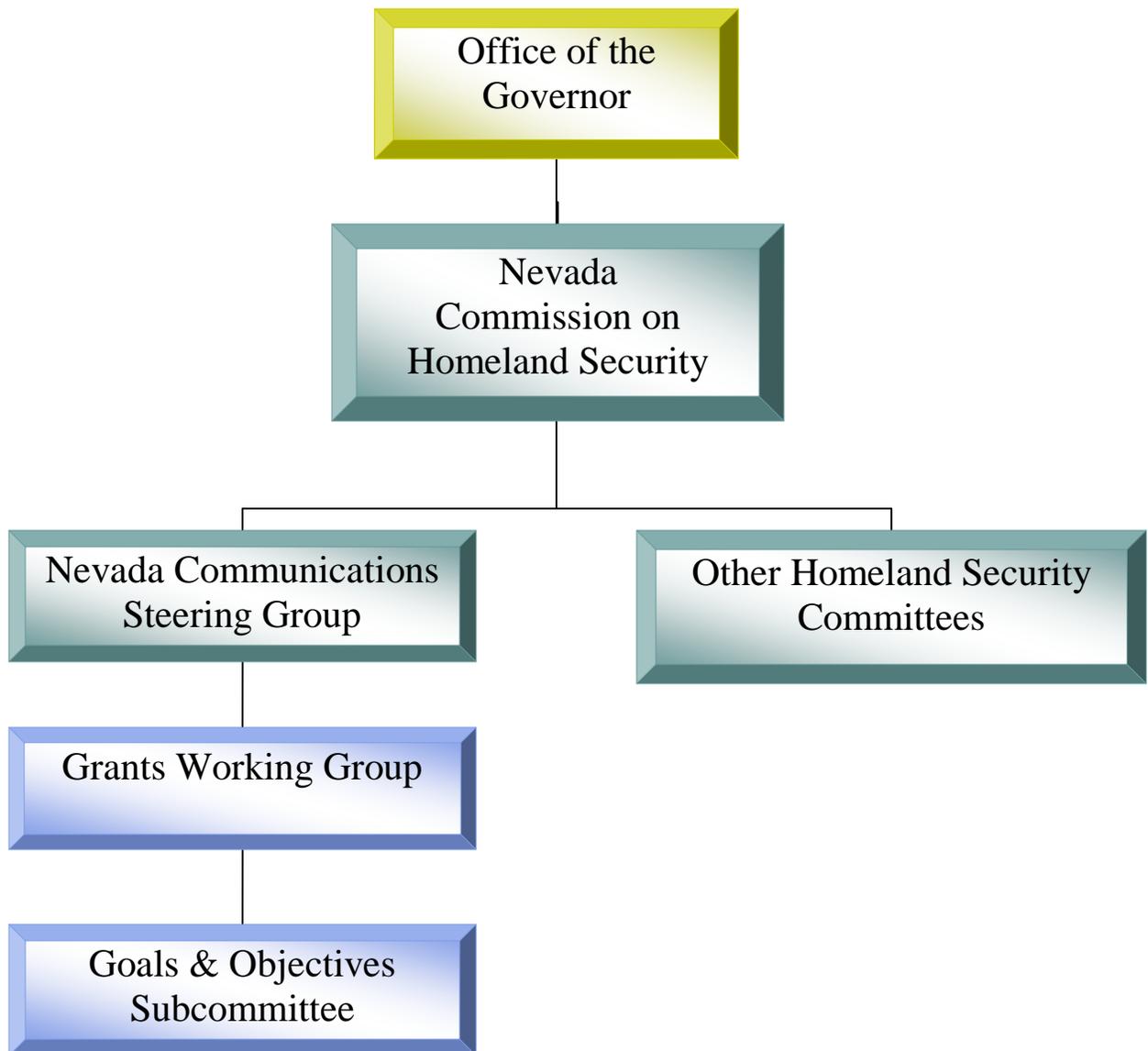


Figure 4-1 Governance Organization Chart

4.3 Charter for the Nevada Communications Steering Committee (NCSC)

Please refer to the NCSC web site at: <http://homelandsecurity.nv.gov/NCSC.htm>

4.3.1 Responsibilities of the Nevada Communications Steering Committee

- Establishing and managing interoperable communications working groups
- Maintaining and updating this SCIP
- Developing and recommending final solutions and implementations
- Establishing training recommendations in support of this SCIP
- Recommending chains of command for interoperable communications including trained Communications Unit Leaders
- Developing Memoranda of Understanding and Sharing Agreements for interoperable communications
- Notifying agencies of regular interoperable equipment/solutions testing and assisting agencies with test evaluation and the dissemination of results
- Continual re-evaluation of regional requirements as technology evolves and circumstances dictate

For additional information, please refer to the NCSC web site at: http://nitoc.nv.gov/it_ncsc.htm

4.3.2 Members of the NCSC

Members of the NSCS are shown in A.

4.3.3 Meeting Schedule

Unless otherwise scheduled, the NCSC will have bi-monthly meetings.

4.4 Multi-Jurisdictional/Multi-Discipline Agreements

Currently, there are various multi-jurisdiction/multi-discipline agreements in place. Primarily those agreements exist within southern Nevada (Clark County). However, there are other agreements within the state that include the agreement comprised of the 6 rural counties as mentioned earlier. There will definitely be additional agreements as Nevada proceeds in achieving statewide communications interoperability and as the need for various agreements arise for establishing appropriate user relationships.

4.5 Updates to the SCIP

The NCSC has the responsibility to review this document annually. Requests for modifications or additions to this document should be submitted to the SCIP point of contact for distribution to the NCSC. Updates can also be recommended by any of the participating agencies or stakeholder subcommittees. Suggested and/or recommended changes to this SCIP will be made public as part of the process in advance of any final approvals.

4.6 Technology

The following communications systems and equipment listed below in Tables 4-1 thru 4-5 are currently operational in the State of Nevada:

Table 4-1 Radio Caches

Location and composition of Radio Caches are contained in each of the Regional TICP's. Additionally, cache radios have been inventoried using RFID and information uploaded to CASM.

Table 4-2 Interoperability Repeaters in Operation and Programmed Channels

Jurisdiction	Agency	Repeaters	Programmed Channels
Clark County	LVMPD/SNACC	150/800MHz	ICALL/ITAC
Clark County/Nye County/AZ/CAL	Clark County Office of Emergency Management and Homeland Security	150MHz	Clark County Mutual Aid
Clark County	LVMPD	150MHz	LVMPD Information Channel
Clark County	SNACC	800MHz	SNACC Mutual Aid
Clark County	SNACC	800MHz	SNACC IOP1-IOP16

Table 4-3 Shared System/Types and Agencies

Jurisdiction	System	Owner	# of Agencies
	SNACC 800 MHz Trunked	SNACC	27
	NSRS 800 MHz Trunked	Nevada Department of Transportation	
	WCRCS	WCRCS	17
	Northern Nevada Area Communications Consortium (NNACC) <i>In Development</i>	N/A	

Table 4-4 Gateways and Agencies

Owning/Managing Agency	Gateway Name	Gateway Make/Model	Type
ICALL/ITAC/VHF Interconnect	Fixed Link	Cross-Band Repeater	Fixed
Clark County OEM - IT Department	Office of Emergency Management and Homeland Security Dispatch Center ACU-1000	JPS ACU-1000	Fixed
City of Las Vegas (Fire)	Mobile Command Post	JPS ACU-1000	Mobile
City of Las Vegas (Fire)	Fire Station 2	JPS ACU-1000	Fixed
City of Henderson (Police & Fire)	Mobile Command Post	JPS ACU-1000	Mobile
Clark County Fire	Mobile Command Unit	ICRI	Fixed
LVMPD	Network First	M/A-COM	Mobile
LVMPD	Gateway	JPS ACU-1000	Fixed
City of North Las Vegas (Police)	Mobile Command Center	Infinimode	Mobile
Southern Nevada Health District (SNHD)	Mobile Command Center	JPS ACU-1000	Mobile

Table 4-5 POCs for Maintenance/Service of Core Systems

System	Agency	Name/Title	Phone
Southern Nevada Area Communications Council (SNACC) 800 MHz Trunked	SNACC	Jim Wilson Systems Manager	702-455-7390
Nevada Shared Radio System (NSRS) 800 MHz Trunked	Department of Transportation/Sierra Pacific Resources	Robert Chisel Assistant Director, NDOT	775-888-7440
LVMPD Radio System VHF Conventional/700MHZ OpenSky	LVMPD	Robb Johnson Communication Systems Director	702-828-3111
Washoe County Regional Communications System (WCRCS)	WCRCS	Craig Harrison Manager Washoe County Telecommunications	775-328-2131
Northern Nevada Area Communications Consortium (NNACC) <i>In Development</i>	Elko County	Dale Lotspeich Elko County Sheriff	775-777-2501

The following communications systems and equipment represent projects currently underway and/or proposed to be addressed in the near future:

- *Common and Mutual Aid Channels.* Establish and (where needed) re-establish common and mutual aid frequencies and channels.
- *Equipment Caches.* Establish and maintain radio equipment caches for deployment during emergency and planned events.
- *Talk group Linkages.* Establish talk groups on shared systems (core systems) allowing for conventional interconnects.
- *Gateways.* Construct gateways statewide between disparate frequency bands.
- *Connect Dispatches.* Construct a network connecting dispatch centers within the state.
- *Standards.* Define, through users, the minimum standards for new radio equipment and a schedule for implementation.

The State plans to complete an additional assessment of communications partners (tribes, hospitals, resort hotel/casinos, etc.) to identify all of the communications systems and equipment currently operating in the state. Casinos in Las Vegas have been approved to access the Clark County Office of Emergency Management and Homeland Security Mutual Aid Network system during emergencies. They are not approved to perform their day-to-day operations on the network.

Support for Legacy Systems

Within the State of Nevada, there are numerous legacy systems. Because funds have been expended by all levels of government, tribal nations and private entities within the recent past, it isn't expected that such systems will be replaced. Rather, gateways and platform interconnects are being procured and installed to allow for interoperability with use of existing equipment in support of the "system of systems" concept. The State is however requiring that all purchases made for new equipment after 2013 must be P25 capable and are strongly encouraging that all procurement for replacement equipment be made in consideration of this requirement. Sustainability of all systems is expected to be incorporated into ongoing operational budgets at the state, local, tribal and private sector levels.

4.6.1 Migration Plan

The NCSC has adopted, as a technical standard, two long-term convergence paths. The first is Internet Protocol (IP) based and the second is for future statewide migration to P25 capability. All communications partners throughout the state have been and continue to be encouraged to follow a phased replacement process based on the lifecycle of existing equipment and to ensure P25 compatibility in the equipment procurement process. To assist in this process, the NCSC maintains a standing technical subcommittee to evaluate technology and technical standards of which will be provided to all communications partners.

4.6.2 Process for New Purchase Compliance

During the 2003 Legislative Session of the Nevada Legislature, laws were passed amending Nevada Revised Statutes Chapter 332 and 333 (Nevada's purchasing laws for state and local government) requiring that all purchases for communications equipment at the state and local levels be made in compliance with the provisions set forth in this plan. Consideration for funding to state and local entities will be based upon compliance with Nevada Revised Statutes and standardization requirements. Compliance will further be verified through internal and external audits, and compliance reviews.

4.7 Standard Operating Procedures

The Local Emergency Planning Committee (LEPC) in each county will be responsible for the development and coordination of NIMS compliant Standard Operating Procedures (SOPs). On a statewide basis, the SOPs will be coordinated through the NCSC. The state will identify and develop NIMS compliant SOPs that address interoperable communications between state and local agencies and provide technical assistance to tribal, NGO and private sector entities in the development of SOPs. The state will further develop a recurring certification process as there is not one in place at this time. The development of this process is now underway.

Currently, there is great disparity between each locality relative to the level of documentation pertaining to SOPs that each has or does not have. Some cities and towns indicated they have no SOPs in place whether formal or informal, written or unwritten. Some cities and towns have

indicated they have informal, unwritten agreements, while others have indicated that they have formal and fully documented SOPs.

Article Four of the Nevada Constitution delineates that the state cannot dictate to local government how to do business. Therefore, the process by which counties and cities develop, manage, maintain and upgrade their SOPs is at the discretion of each entity. The State is, however, ensuring compliance with federal requirements as a condition of funding and all compliance measures are being monitored by the Department of Public Safety, Division of Emergency Management (DEM) relative to NIMS compliance and the NCSC for all other purposes of this plan.

4.7.1 Assessment of Current Local, Regional and State SOPs

An assessment is now underway to determine what SOPs exist and at what level. Standard Operating Procedures (SOPs) are not uniformly in place throughout the state. Based upon the comments received from the stakeholders, it is clear that attention must be dedicated in this area. Using the SAFECOM Interoperability Continuum as a guide, SOPs need to be established first at the local level for all jurisdictions, then joint for emergency as well as planned events, then regional SOPs, where applicable, ensuring NIMS compliance for all.

4.7.2 Process to Develop, Manage, Upgrade and Communicate SOPs

Through use of the U.S. Department of Homeland Security SAFECOM, Writing Guide for Standard Operating Procedures and in compliance with the National Incident Management System (NIMS), each county and city, at a minimum, is responsible to ensure that they have their own intra-agency communications SOP. These shall be supplemented by joint SOPs for planned events, when applicable, and joint SOPs for emergencies.

The State Interoperability Coordinator, in conjunction with the NCSC and the Commission on Homeland Security, will have as part of their responsibility that of assisting state, local, regional, tribal and private sector agencies with the writing of all pertinent joint SOPs.

4.7.3 Agencies Included in the Development SOPs

All stakeholders through the NCSC shall be involved with the development of and adherence to SOPs. Many of those surveyed expressed a desire to receive assistance with the writing and implementation of SOPs. Local agencies and regional consortiums shall have SOPs that provide consistent guidance. The State shall have SOPs that incorporate those at the local and regional levels. The tribal nations in Nevada have historically been partners in initiatives pertaining to public safety. The state continues to encourage participation of the tribal nations will continue to assist with their development of SOPs as well as collaboration with the government entities of the county in which they reside.

While each jurisdiction (city, town, tribal nation and region), each discipline (police, fire, EMS, health care facilities, public works, transportation, etc.) and NGOs should already have their own

Standard Operating Procedures in place for the use of their communications equipment, there are clearly those entities that have not achieved a fully documented SOP. The State will continue working with all entities in developing and maintaining all necessary SOPs. The State further recognized that it is critical for SOPs be written, understood, trained for and exercised to attain cooperation of all parties and compliance with its content.

4.7.4 Compliance of SOPs with NIMS

As required by Nevada Revised Statute and as a required national standard, all components of this plan must be compliant with the National Incident Management System (NIMS). As such, all Standard Operating Procedures are to be written in such a manner to be NIMS compliant, which is consistent with the needs of the Incident Command System and all preparedness efforts.

4.8 Training and Exercise Plan

The State of Nevada conducts a Training and Exercise Planning Workshop (TEPW) on an annual basis. This workshop is intended to identify all statewide training and exercise needs and set forth the statewide training and exercise priorities in the Statewide Training and Exercise Plan, inclusive of consideration for funding sources and/or restrictions. This plan is established for the purposes of coordinating all training and exercise initiatives and to ensure that all training and exercise resources are utilized in such a manner as to attain the maximum benefit for as many participants as possible. Therefore, all training and exercises are developed with intent of leveraging all available resources and incorporating multiple project objectives.

4.8.1 Process to Develop, Maintain, Upgrade and Coordinate Training and Exercise Plans

- *NIMS Training.* Develop training schedules for public safety personnel on National Incident Management System (NIMS).
- *Certify and Credential.* Train and certify Communications Unit Leaders in public safety first-responder disciplines.
- *Technical Equipment Operational Training.* Train and certify users on intended equipment usage and unique capabilities.
- *Regular Refresher Training.* Require and provide regular refresher training.
- *Interagency Exercises.* Regularly schedule and execute interoperability exercises; may be part of larger exercise.

The Department of Public Safety, Division of Emergency Management (DEM) has implemented the Nevada Training and Exercise Program. The program will employ software (NEXS) to schedule and track exercises conducted throughout the state. All state sanctioned exercises will comply with the following standards:

1. All exercises statewide will be entered into the NEXS system.

2. All exercises will comply with the Homeland Security Exercise Evaluation Program (HSEEP).
3. All exercises will generate an after action report (AAR).
4. Corrective action identified in the AAR will be addressed in compliance with requirements of the HSEEP and be monitored for completion.

Training courses specific to interoperable communications systems and equipment are intended to be delivered following completion of a statewide training and exercise needs assessment. All courses and planned exercises will be provided in Table 4-8 upon completion of the assessment.

In the interim, communications equipment and users will continue to be included in all statewide exercises that are scheduled for numerous ongoing projects.

4.8.2 Process for Offering/Requiring Training, Exercises and Certifications

In recognition of NIMS requirements for training and certification, all emergency first responder agencies must complete the minimum required NIMS courses. It is the responsibility of each jurisdiction to ensure compliance of all of their emergency first responder personnel.

Due to the availability of many of the NIMS required courses on-line and the limited resources available to address all training and exercise needs, the state attempts to limit courses approved under the Statewide Training and Exercise plan to only those courses that cannot be acquired through on-line training tools.

All courses offered under the Statewide Training and Exercise Plan is posted on the Department of Public Safety, Division of Emergency Management (DEM) website which is located at www.dem.state.nv.us. Additionally, the DEM sends out notifications to all statewide emergency management directors via e-mail. All courses delivered by the DEM provide certificates of completion for the students.

4.8.3 Cross-Disciplinary Training

All training and exercise programs are developed to encourage participation from multiple disciplines up to and including scenarios that would require a multi-discipline response that crosses over jurisdictional boundaries. As it would relate to interoperability of communications systems, cross-disciplinary training is necessary to ensure adequate ability of the various disciplines to communicate seamlessly with each other during both emergency and planned events. Providing for this type of training will also be of benefit in identifying other areas for improvement in event that a multi-discipline/multi-jurisdiction response should become necessary.

4.9 Usage

Regular usage of equipment is paramount in sustaining operational skills, policies and procedures. Ongoing training and exercises are vital to the users continued familiarity with not only the equipment, but the establish SOP(s) as well. The long-term goal is to achieve or improve interoperability capabilities for utilization on a daily basis.

4.9.1 Coverage and Operability

Nevada public safety entities understand that fundamental radio communication issues of *operability* and *coverage* are significant elements in pursuing *interoperability*. While these fundamentals affect public safety agencies, they are especially notable in Nevada’s rural areas.

“Operability” requires sufficient, and operable, equipment. “Coverage” is affected by a jurisdiction’s geography and its interference with radio waves (“dead spots”). Although not specific to this plan, coverage and operability problems are apparent in Nevada’s interoperability survey results, interviews and NCSC member comments. Nevada acknowledges operability and coverage as basic, fundamental steps in achieving interoperability.

Nevada public safety agencies provide services for major events in the population centers of Reno and Las Vegas, as well as rural areas. Hundreds of thousands of people participate in outdoor celebrations of New Year’s Eve in Las Vegas, tens of thousands attend Reno’s Air Races and Hot August Nights, and the annual Burning Man event in rural Nevada attracts nearly 100,000 people to the remote desert for several days. See Table 4-9 thru 4-11 for Major Events, Large Conventions and the list of current interoperability plans that are in place to responds to these events.

In each of these events Nevada agencies use existing radio resources to establish at least basic interoperability. Through gateway interconnects and radio caches, public safety entities coordinate services to large numbers of people. In instances where the Washoe County or SNACC radio systems are involved, more sophisticated interoperable connections are possible for disciplines sharing those systems.

Table 4-6 Major Events in Nevada

MAJOR EVENTS		
Reno	Las Vegas	Rural
Hot August Nights	New Years Eve	Burning Man
Reno Air Races	Las Vegas Grand Prix	
Street Vibrations	NBA All Star Game	
National Balloon Races	Laughlin River Run	
X Games	NASCAR Races	
Rib Cook Off	National Finals Rodeo	

MAJOR EVENTS		
Reno National Rodeo	Professional Bull Riders Association Rodeo	

Table 4-7 Large Conventions in Nevada

Large Conventions		
Reno	Las Vegas	Rural
Safari Club	National Association of Broadcasters	
National Bowling League	Consumer Electronics Show	
National Rifle Association	ICWE	
Veterans Administration		
Annual Air Force Support Group		
Rocky Mountain Elk Association		
American Teacher's Association		
Mega Computer Show		

Table 4-86 Nevada Communication and Interoperability Plans

Plans:
WebEOC Communications Plan (ICS-205)
Washoe County Regional Communications System (WCRCS) established inter-agency common talkgroups
Southern Nevada Area Communications Counsel (SNACC) established inter-agency common talkgroups
Reno EMS and local hospital emergency rooms have 800 MHz capability on the WCRCS
Las Vegas EMS and local hospital emergency rooms have 800 MHz capability on the WCRCS
WCRCS has hardwired 800 MHz to VHF gateways
Metro has hardwired crossband 800 MHz to VHF repeaters
SNACC and WCRCS have standalone Mutual Aid repeaters
Clark County OEM Mutual Aid Network System

5 Strategy

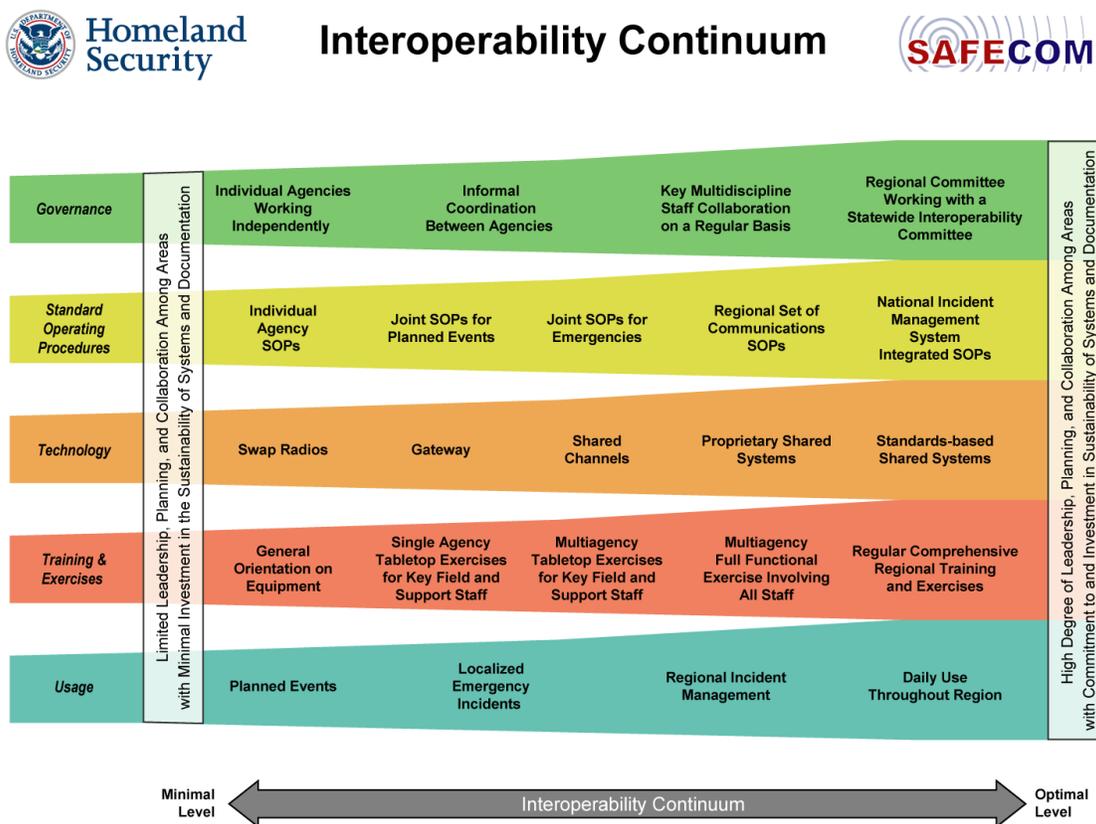


Figure 5-1 SAFECOM Continuum

5.1 Mission

Provide the leadership, governance structure and environment necessary to foster the relationships that will be required to support the highest level of interoperability between all agencies supporting public safety in the State through standard operating procedures, planning, technology, training, exercise and usage of communications resources within the State. Educate key policy makers at all levels of the government regarding the state of Nevada’s public safety communications, as well as needs and benefits of continued investment to further interoperable communications.

Establish continuing funding and formal authority for NCSC to fulfill State Interoperability Executive Committee duties, establish and coordinate interoperable public safety communications within the State, and advise the Homeland Security Commission on public safety radio communications.

5.2 Vision

The following statement has been adopted by the NCSC to describe the overall goal envisioned for Nevada:

Providers of public safety and critical infrastructure services in the State of Nevada, in both the public and private sectors, at all levels of government, including local, county, special districts, authority, tribal, state and federal, will possess the tools needed to communicate and work together:

- *To more effectively address their day-to-day missions*
- *To respond to and recover from large-scale emergencies:*
 - *In real time*
 - *Across disciplines and jurisdictions*
 - *With optimum balance between efficiency and effectiveness*
- *At the lowest appropriate long-term cost to the public, given the criticality of the public safety mission.*

5.3 Statement of Principles NCSC

- Encourage and maintain a governance structure that emphasizes transparency, accountability and collaboration
- Encourage a comprehensive focus on key interoperability success factors, including governance, SOP's, technology, training and exercises, and usage, as discussed in the SAFECOM Interoperability Continuum.
- Review research on Best Practices and Lessons Learned.

Governance must not be controlled by the State, any State agency, or any single member, discipline, level of government, or geographical area. It must be representative of the entire Nevada Public Safety community.

5.4 Goals and Objectives

This SCIP directly supports and addresses the Interoperable Communications Initiative included as part of the Nevada Program and Capability Enhancement Plan, and the already-established Nevada Communications Interoperability Plan. The SAFECOM Interoperability Continuum is used as a measurement.

It will support the Interoperable Communications Initiative, in accordance with our previously-established Plan, by: a) using our developed Governance; b) completing detailed engineering and technical specifications; and c) development of Standard Operating Procedures for interoperability.

With the engineering detail and technical specification, we will be prepared to: a) deploy emergency radio caches; b) build gateways between bands, and; c) interconnect four major

systems to create a "system of systems". We will then put policy agreements in place with jurisdictions requiring the use of SOPs for the use of the deployed technical capability. Finally, we will create training materials from the developed SOPs and engineering detail.

5.4.1 Governance

Goal 1: *Develop regional working groups to lead development of regional Tactical Interoperable Communications Plans (TICPs) and enhance local input on communications interoperability issues.*

Objective: Continue multidiscipline, multi-jurisdictional representation, create regional subcommittees.

Priority: High **Time Period:** Near Term

Goal 2: *The State shall revise, update and promulgate an interagency Radio Frequency Plan. The plan shall comply with rules and regulations of the Federal Communications Commission and the U.S. Department of Homeland Security, and shall be reconciled with surrounding states. Progress on this goal will be reported to the Commission on Homeland Security on a quarterly basis.*

Objective: The NCSC will work with appropriate state agencies and technical committees to create the radio frequency plan.

Priority: High **Time Period:** Near Term

Goal 3: *Work with Nevada-based senior management of federal agencies to encourage, enhance and support federal participation in the NCSC.*

Objective: The NCSC and Department of Information Technology (DoIT), in cooperation with the new Interoperability Coordinator, will establish regional meetings in 2008.

Priority: Medium **Time Period:** Near Term

Goal 4: *Establish Communications Assets Survey & Mapping (CASM) participation for all public safety agencies in Nevada.*

Objective: Continue discussions with the U.S. Department of Homeland Security, Interoperable Communications Technical Assistance Program (ICTAP) to implement CASM in 2008

Priority: Medium **Time Period:** Near Term

5.4.2 Standard Operating Procedures (SOP)

SOP Objective 1: *The State will work with the regional working groups to define, test and exercise formal, statewide policy and procedures for local agencies and State interoperability using existing, deployed technology.*

Priority: High **Time Period:** Near Term

SOP Objective 2: *Nevada will develop, test and exercise standard operating procedures for the use of mobile and fixed radio system gateways based on the SOPs.*

Priority: Medium **Time Period:** Near Term

5.4.3 Technology

Technology Goal 1: *Establish a formal working relationship with appropriate federal entities to establish common, shared channels for federal, state and local uses.*

Objective: Approach the Chair of the local Federal Executive Association (located in Las Vegas) for assistance in this regard.

Priority: High **Time Period:** Near Term

Technology Goal 2: *Encourage and track the growth caches of portable radios configured to operate on the various proprietary shared systems to provide communications to inbound mutual aid resources.*

Objective: The operators of the systems will be responsible for maintaining the caches with support from the NCSC.

Priority: High **Time Period:** Near to Mid-Term

Technology Goal 4: *Support and encourage a statewide network of inter-tied base stations/repeaters statewide to provide communications gateways between users in disparate frequency bands. (Short Term Gateways)*

Objective: To be carried out by the NCSC as these resources are intended to be shared statewide with the entire Nevada public safety community. Currently under engineering and funded with completion anticipated in 2009.

Priority: High **Time Period:** Near Term

Technology Goal 5: *Support and encourage a statewide IP-based network to interconnect public safety communications centers and their associated radio systems.*

Objective: As these resources are intended to be shared statewide with the entire Nevada public safety community, the NCSC will work with individual users and the DoIT to establish plans and networks.

Priority: Medium **Time Period:** Near to Mid-Term

5.4.4 Training & Exercise

Training & Exercises Goal 1: *Carry out regional interagency, cross-discipline interoperability exercises based on DHS HSEEP exercise guidelines on at least a biennial basis. These exercises may be an element of a larger exercise.*

Objective: The Department of Public Safety, Division of Emergency Management will lead the development of the exercises.

Priority: High **Time Period:** Mid-Term

Training & Exercises Goal 2: *Train, certify and deploy qualified and credentialed Communications Unit Leaders in all public safety disciplines.*

Objective: Implement through creation of administrative law or regulation, or by policy established through the training and certification bodies, at the request of the NCSC.

Priority: High **Time Period:** Near Term

Training & Exercises Goal 3: *Once training programs have been developed and delivered for interagency operations, require periodic refresher training.*

Objective: To be implemented through creation of administrative law or regulation, or by policy established through the training bodies, at the request of the NCSC.

Priority: High **Time Period:** Mid-Term

Training & Exercises Goal 4: *In cooperation with and through the existing state training bodies, develop training programs for all public safety personnel in the state based on the NIMS-based Standard Operating Procedures, consistent with the PSIC program .*

Objective: Continue NIMS training now underway through Department of Public Safety, Division of Emergency Management (DEM).

Priority: High **Time Period:** Near Term

5.4.5 Usage

Usage Goal 1: *Achieve or improve interoperability capabilities for utilization on a daily basis.*

Objective: Encourage the use of interoperable frequencies and talk groups between agencies whenever practical.

Priority: High

Time Period: Ongoing, Long Term

5.5 Assess & Measure

Progress will be assessed and measured for short-term goals and objectives based on performance against measures. Long-term progress will be assessed and measured annually, and will be reported to the NCSC and NCHS not later than December 31st of each year.

This SCIP will be reviewed and updated annually by the NCSC and as necessary for changes in systems technology or as conditions require. This SCIP is and shall be considered to be a living document that is flexible to be modified as deemed appropriate by the NCSC based upon changing conditions. Additionally, this SCIP shall be utilized for training to ensure that all stakeholders remain knowledgeable of its intent and content.

5.6 Coordination with Neighboring States

The NCSC is the designated coordination body for interstate public safety communication issues for Nevada. Currently, there is coordination of communication systems between Nevada and contiguous states including Utah, California and Arizona. For example, there is working coordination for local jurisdiction first responder communication purposes between the following:

- Placer County, CA
- San Bernardino County, CA
- The State of Utah
- Mojave County, AZ
- Twin Falls, ID
- Tooele, UT
- Entities within Oregon

The Department of Public Safety has MOUs with all local law enforcement agencies bordering Nevada. See Figure 5-2 for designation of surrounding states to Nevada.



Figure 5-2 Cooperating States with Nevada

5.7 Addressing Data and Voice Interoperability

Nevada has adopted a long-term convergence standard of IP-based transport for both data and voice, and is currently moving towards IP-based network switches for interoperability of both voice and data. Nevada has further adopted a long-term convergence on P25 capable equipment.

Nevada is developing information sharing policies with jurisdictions for communication and interoperability purposes as it would relate to the fusion centers and has adopted common Global Justice Extensible Markup Language (GJXML) compliant data sharing tools through its fusion center development.

The intent of this plan is to provide compatibility for data interchange for all users. Nevada will be hosting services through Service Oriented Architecture (SOA).

5.8 Catastrophic Loss of Communications Assets

Nevada has accomplished and identified methods of addressing catastrophic loss of communications assets. In as much, Nevada has established levels of catastrophic recovery mechanisms to include:

- Redundant systems and transport diversity to include transport capacity on state and county operated microwave and fiber systems and leased commercial circuits with parallel and/or looped paths.
- Ability for graceful degradation and independent operations including fallback to conventional systems within core systems.
- Replacement cache equipment at the state and local levels to include radio caches, mobile repeaters, gateway devices and mobile communications vehicles which would be used in the event of a catastrophic loss. Note: The State will be pursuing additional STR elements.
- Through established MOUs, the State and local entities currently have organized extensive auxiliary communications (i.e., RACES, ARES).

Additional preparedness measures in addressing the potential for a catastrophic loss of communications assets including the following:

- Creation and implementation of an intrastate mutual aid compact known as the Nevada Emergency Management Assistance Compact (NEMAC) which has been signed by all of the counties. The NEMAC addresses issues of liability, accountability and reimbursement as it would relate to the sharing of resources across jurisdictional boundaries.
- Nevada has been and will continue to exercise scenarios which incorporate a catastrophic loss of communications assets and response procedures necessary to reinstate communications capabilities.
- Nevada first responder communications assets are divided among the core systems and can be deployed throughout the state.
- Development of a statewide Tactical Interoperable Communications Plan (TICP) that will address how the catastrophic replacement mechanisms will be used procedurally.
- The current engineering plan is slated to scrutinize and identify single points of failure on a system perspective.
- There is an agreement in place with several cell service providers at a state level for emergency provisions of replacement commercial cellular communications.

5.9 Strategy for Addressing Transportation

Nevada's transportation providers have been incorporated as a working entity within the Homeland Security Working Group and goals and objectives relative to transit security have been integrated into the State Homeland Security Strategy with respective elements addressing Plans/Procedures, Organization, Training, Exercise and Equipment. Other initiatives already established or currently in progress include:

- The southern Nevada Regional Transportation Commission (RTC) is working closely with the Northern Nevada RTC for purposes of developing standardized policies and procedures as well as addressing a statewide emergency transportation plan that incorporates the use of school buses and privately owned bus assets.
- The Clark County School District, the 5th largest in the county with some 1,400 buses, is currently planning the development of interoperability links with public safety agencies.
- The McCarran International Airport is on the SNACC 800 MHz public safety radio system in Clark County.
- In Washoe County, which includes the cities of Reno and Sparks, the Washoe County School District bus fleet and airport authority already utilize the 800 MHz radio system.
- The State NSRS 800 MHz radio system is utilized by state agencies for highway coverage. This includes the Nevada Department of Transportation (NDOT) and the Department of Public Safety, Nevada Highway Patrol (NHP).

5.10 Strategic Technology Reserve (STR)

5.10.1 Cache of communications equipment

Nevada has several strategically located radio caches including a large cache which is currently being procured that will be placed in Southern Nevada. This cache will be available for deployment throughout the State. A similar and complimentary cache has been planned for Northern Nevada.

A smaller cache currently exists at the State Emergency Operations Center also for statewide deployment. See Table 4-1 identifying radio caches. Similarly, mobile repeaters have been acquired and are available for statewide deployment.

Finally, intended and planned STR equipment includes additional portable radios, portable repeaters, mobile communications gateways, and mobile communication vehicles strategically located for statewide deployment with a maximum 4-hour response time.

5.10.2 Pre-identified procurement vehicles

Nevada has pre-identified and established various methods for procurement that include, but are not limited to:

- The NEMAC allows access of communications equipment statewide through mutual aid.

- Under a declared emergency, the Governor's Extraordinary Powers as provide pursuant to the Nevada Revised Statutes, Chapter 414, allows for the purchase of equipment without regard for existing laws, policies or procedures.
- In the event of the absence of a Governor's Declaration, Nevada Revised Statutes, Chapter 333 provides provisions for emergency purchases in the event that there is a threat to life.
- Local governments have pre-established purchase orders and contracts with vendors of which immediate purchases can be made.

5.11 Addressing Local and Tribal Government Needs

Statewide, there is an established process for the review of programs and capabilities. These reviews provide items for discussion, planning and decision making in updating the State and Urban Area strategies. All federal, state, local, tribal, NGO and private entities receive an invitation to participate in the process. These reviews are conducted by the Homeland Security Working Group which is currently comprised of approximately 130 distinct agencies and organizations. Tribal involvement has included representation from the following tribal nations:

- Pyramid Lake Paiute Tribe
- Walker River Paiute Tribe
- Elko Band Council
- Washoe Shoshone Tribe
- Fallon Shoshone Paiute Tribe
- Duck Valley Tribe
- Las Vegas Paiute Tribe
- Moapa Paiute Tribe
- Inter-Tribal Council of Nevada

Examples of participatory NGOs include the following:

- Nevada Hospital Association
- ARES/RACES Organizations
- Sierra Pacific and Nevada Power
- Southwest Gas Corporation
- Kern River Gas
- Southern Nevada Coalition of Organizations of by and for the Deaf and Hard of Hearing
- Deaf and Hard of Hearing Advocacy Resource Center

5.12 National Incident Management System (NIMS) Compliance

The Department of Public Safety, Division of Emergency Management (DEM) has been the lead agency for NIMS compliance for the State of Nevada. In achieving NIMS compliance, the DEM

has conducted workshops and provided on-site technical assistance. Included in these efforts, the DEM also provided training on the NRP.

Additionally, the DEM has implemented the Nevada Exercise Program (NEP). The NEP is consistent with the federal compliance requirements of NIMS. The NEP incorporates best practices of federal, state, local, and tribal exercise programs; federal grant and program requirements incorporating use of the Homeland Security Exercise and Evaluation Program (HSEEP) as the basis for planning, conducting, and evaluating all exercises in Nevada; and providing training, technical assistance, and toolkits/programs for exercise practitioners.

Nevada exercises will comply with the following minimum standards:

1. Nevada jurisdictions and state agencies will participate in the annual Training and Exercise Planning Workshop (TEPW) to identify training and exercise activities and associated target capabilities that support the State/Urban Area Strategies.
2. Exercises will be entered into the National Exercise Reporting System (NEXS).
3. Exercises will comply with the concepts of HSEEP.
4. Exercises will generate an After Action Report / Improvement Plan (AAR/IP).
5. Corrective actions identified in the AAR/IP will be tracked for resolution.

The State of Nevada will conduct no less than one annual exercise of varying degrees of complexity and scope, dependent on the needs of local jurisdictions, state agencies, and federal grant program requirements.

5.13 Review and Update Process

The state's strategic planning process reflects the current year plus an additional four year outlook for a five-year perspective. The NCSC that participated in the development of the initial plan will continue to be the core group for future reviews and revisions.

Changes in technology, legislative mandates, funding sources, communications technology/system acquisitions are a few of the issues that will emerge over time resulting in the need for revisions and updates to the SCIP.

Regardless of updates that may occur during the year, the NCSC will hold an annual session specifically for the purpose of completing revisions and updates to the SCIP. A change summary document will be created with each revision and placed as an attachment to the plan.

A new edition of the SCIP will be published and distributed annually following the appropriate approval process, which involves subcommittee review and approval by the full NCSC with subsequent final approval by the NCHS. The state will research the most effective methods to provide training and orientation once the SCIP is released

6 Implementation

The State will review each Objective and go through a process to evaluate if the ‘Objective’ results in one or more projects. If so, the Project Management Life Cycle of Initiating, Planning Start-up and Execution will be applied, if not the Objective will be tracked separately.

6.1 Performance Measures

Performance measures will be developed based upon determination of project(s) that will exist within each of the objectives. Some of the more broad performance measures will include the following:

- 1) The ability of federal, state, local, tribal, NGO and private entities to communicate with voice and data effectively and efficiently, with subsequent consideration of video in the future.
- 2) Coordination of state and local interoperable communications efforts.
- 3) Development and sustainment of a statewide communications equipment and capabilities database.

6.2 Educating Policy Makers and Practitioners

Communication with policy makers and practitioners is the cornerstone for the success of any effective plan and program. It is recognized that without providing policy makers and practitioners with an understanding of the plan and associated programs that any efforts to implement such will be an exercise in futility due to absence of their buy in and support. Additional efforts will be made to ensure adequate information is provided to such individuals and entities through meetings, e-mail, notification of public meetings as well as working group meetings, and presentations before the NCSC and NCHS.

6.3 Roles and Opportunities for Involvement

Opportunities exist for state, local, tribal, NGO and private involvement through representation at the NCSC, NCHS and Homeland Security Working Group meetings. Participation during project implementation is also critical to the success of the project. Without adequate participation, and recognition of the broad roles and responsibilities (see Table 6-1) of all levels of government and participatory NGO/private entities, it is virtually impossible to ascertain the effectiveness of the project and therefore the ultimate accomplishment of the stated goals and objectives.

Table 6-1 Entities, Roles, and Responsibilities

Entity	Role	Responsibility
Local	Represent the needs of local government entities within the state.	Provide input that is representational of statewide local government needs and requirements, and participate in the implementation of statewide initiatives.
State	Provide leadership and input into the achievement of statewide communications interoperability capabilities	Participate in the development of the SCIP, SOPs and assist in the implementation processes as it relates to the SCIP, SOPs, NIMS, HSEEP, etc. as well as provide support to all non-state entities. Provide technical assistance to local, tribal, NGO and private entities. Participate in the development of state to local interoperability initiatives.
Tribal	Represent the needs of all tribal nations within the state.	Provide input that is representational of the unique tribal requirements and needs on a statewide basis, and participate in the implementation of statewide initiatives.
Non-Government and/or Private Entity	Represent the needs of their NGO or private entity.	Provide input that representational of the specific needs of their NGO and/or private entity as it would pertain to the implementation of the program as well as participate in the implementation of statewide initiatives that can benefit them or assist in the facilitation of public/private partnerships.

6.4 Identify, Develop and Oversee Operational Requirements, SOPs, Training, Technical Solutions and Short and Long Term Funding

The goals identified in the SCIP have been prioritized to address the development and improvement of interoperable communications through the enhancement of governance, technology, SOPs, usage, training and exercises. Through accomplishment of each initiative the state will strive toward the achievement of one or more of the state’s strategic goals. The deliverables that will be determined with each project will continually be evaluated for progress. The SCIP will be modified as necessary in achieving successful implementation of the plan and program objectives.

Funding determinations will be made based upon the priority of the goals set forth in the SCIP. Short-term funding has already been identified for the completion of high priority/short-term projects while understanding that gaps will still continue to exist. Long-term funding strategies are being researched for current and future funding sources.

6.5 POC Responsible for Plan Implementation

The Director of the Office of Homeland Security will serve as the POC responsible for plan implementation until such time as the full-time state Interoperability Coordinator is hired.

6.6 Critical Success Factors

Critical success factors for successful implementation of the plan include adherence to the NIMS: a successful training and exercise program which tests the capabilities of both the systems and stakeholders; and the establishment of SOPs. The most significant component for the overall success of achieving statewide interoperable communications is sustaining the collaboration and cooperation amongst the stakeholders.

7 Funding

7.1 Process for Identifying Ongoing Funding Sources

The process for identifying ongoing funding sources is a perpetual process that will be comprised of joint efforts at all levels of government. All participatory entities will be charged with seeking out and leveraging all funding sources at the federal, state, local, tribal, NGO and private sector levels. Additionally, the NCSC and NCHS will be approached for request to the Nevada Legislature relative to sustainability funding.

7.2 Short Term Funding

Short-term funding has been identified and/or allocated to support some of the implementation activities and the strategic initiatives. In-kind and matching contributions exceeding grant requirements have been committed from agencies with sufficient resources.

7.3 Long Term Funding

Long term funding has not yet been identified. The commitment of funding for ongoing sustainability is a joint commitment that is understood by all entities and must be built into each budget respectively. All funding has not yet been identified for communications equipment purchases and continued maintenance, upgrades, and operations at this time. However, all partners are seeking to leverage all available resources to include NGO and private sector participation and contributions.

8 PSIC Requirements

8.1 PSIC Requirement 1 [Addressing Criteria 11.1]

Describe how public safety agencies will plan and coordinate, acquire, deploy and train on interoperable communications equipment, software and systems that:

- 1) Utilize reallocated public safety spectrum – the public safety spectrum in the 700 MHz frequency band.*
 - 2) Enable interoperability with communication systems that can utilize reallocated public safety spectrum for radio communications; or*
 - 3) Otherwise improve or advance the interoperability of public safety communications systems that utilize other public safety spectrum bands.*
- (#1) Nevada has an established Region 27 700 MHz planning body. The planning body coordinates with and through the NCSC. The NCSC and the planning committee will be closely watching the FCC 700 MHz Block D auction.
 - (#2) Re-banding as wave 1 is in the process of being completed within the State. It is the responsibility of NCSC and Region 27 to provide guidance and coordination as the result of 800 MHz re-banding.
 - (#3) Within the State, the 700 MHz spectrum is being taken advantage of. The largest law enforcement entity in Nevada is moving from 150 MHz to 700 MHz. Additionally, IP switch technology will be used to allow other users on other systems access to 700 MHz interoperability channels.

8.2 PSIC Requirement 2 [Addressing Criteria 11.2]

Describe how strategic technology reserve (STR) will established and implemented to pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.

Reference: Sections 5.8 and 5.10.1 of this plan.

8.3 PSIC Requirement 3 [Addressing Criteria 11.3]

Describe how local and tribal government entities' interoperable communications needs have been included in the planning process and how their needs are being addressed.

Reference: Sections 4.6, 4.7.2, 4.7.3, 5.2, 5.11, 6.1, 6.3, 7.1 and 7.3 of this plan.

8.4 PSIC Requirement 4 [Addressing Criteria 11.4]

Describe how authorized non-governmental organizations' interoperable communications needs have been included in the planning process and how their needs are being addressed (if applicable).

Reference: Sections 4.6, 4.7.2, 4.7.3, 5.2, 5.11, 6.1, 6.3, 7.1 and 7.3 of this plan.

9 Closing

This Statewide Communications Interoperability Plan (SCIP) is an essential element to the success of Nevada's efforts in attaining an increased level of overall preparedness. This SCIP demonstrates the cooperation and collaboration necessary to delineate a statewide perspective on pertinent strategies, goals and objectives for Nevada to achieve communications interoperability for the public safety community and those supporting and assisting organizations that participate during a planned event, emergency or disaster response.

This SCIP establishes a method for all organizations and units of government to provide input and support the continued improvement of public safety interoperability communication programs while working across the SAFECOM Interoperability Continuum. The continued efforts of all public safety communication experts will ensure the successful implementation of this plan and related programs.

Appendix A NCSC Members

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Appendix B Southern Nevada iCall/iTac Interoperability Network

Southern Nevada iCall/iTac Interoperability Network

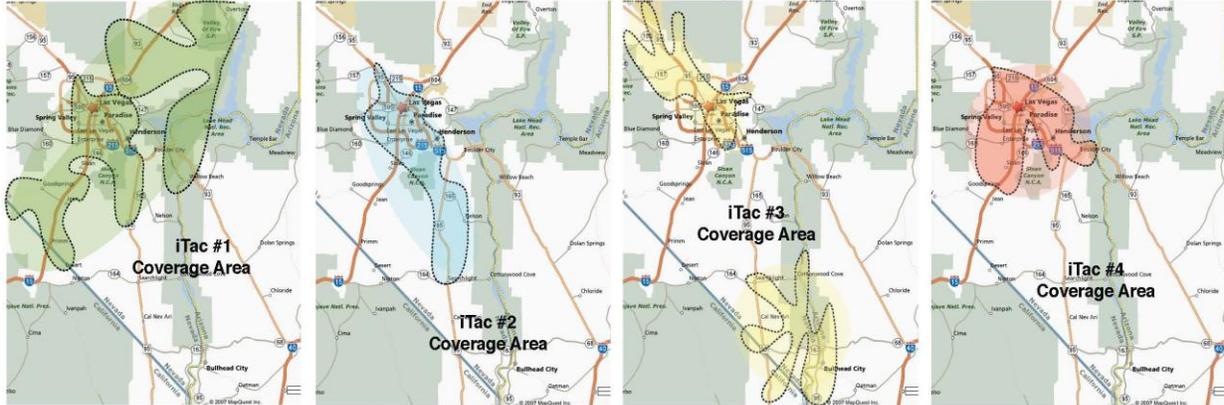


Figure B-1 iCall/iTac Interoperability Network Map

Appendix C Participating SCIP Development Stakeholders

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Note: The above list consists of participants, both past and present, that have contributed to the development of this plan.

Appendix D Glossary of Terms and Acronyms

Item/Acronym	Definition
AAR	After Action Report
AAR/IP	After Action Report/Improvement Plan
ARES	Amateur Radio Emergency Services
BLM	Bureau of Land Management
CASM	Communications Assets Survey & Mapping
CIO	Chief Information Officer
DEM	Nevada Department of Public Safety, Division of Emergency Management
DHS	U.S. Department of Homeland Security
DOIT	Nevada Department of Information Technology
DPS	Nevada Department of Public Safety
EMS	Emergency Medical Services
FCC	Federal Communications Commission
GJXML	Global Justice Extensible Markup Language
HSEEP	Homeland Security Exercise Evaluation Program
HSGP	Homeland Security Grant Program
ICS	Incident Command System
IP	Internet Protocol
LEPC	Local Emergency Planning Committee
LVMPD	Las Vegas Metropolitan Police Department
MACS	Multi-Agency Coordination System
MOU	Memorandum of Understanding
NCHS	Nevada Commission on Homeland Security
NCSC	Nevada Communications Steering Committee
NEMAC	Nevada Emergency Management Assistance Compact
NEP	Nevada Exercise Program
NEXS	National Exercise Reporting System
NGO	Non-Governmental Organization
NHP	Nevada Department of Public Safety, Highway Patrol
NNACC	Northern Nevada Area Communications Consortium
NRP	National Response Plan
NSRS	Nevada Shared Radio System
OIC	U.S. Office for Interoperability and Compatibility
PMBOK	Project Management Body of Knowledge
POC	Point of Contact
RACES	Radio Amateur Communications Emergency Services
RFP	Request for Proposal
RTC	Regional Transportation Commission
SAA	State Administrative Agency
SCIP	Statewide Communications Interoperability Plan
SNACC	Southern Nevada Area Communications Council

State Communications Interoperability Plan

SNHD	Southern Nevada Health Division
SOA	Service Oriented Architecture
STR	Strategic Technology Reserve
TEPW	Training and Exercise Planning Workshop
TICP	Tactical Interoperability Communications Plan
UASI	Urban Area Security Initiative