ARIZONA

STATEWIDE COMMUNICATIONS INTEROPERABILITY PLAN (SCIP)

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Public Safety Communications Advisory Commission (PSCC)

2012

Distribution is limited to the United States Department of Homeland Security and those entities authorized by the State of Arizona and involved in the SCIP development. The Point of Contact (POC) for this document is the Public Safety Interoperable Communications (PSIC) Office in the Arizona Department of Administration – Arizona Strategic Enterprise Technology (ADOA-ASET). Current contact information for the PSIC Office can be found at www.azpsic.gov.

Record of Change

Change No.	Date	Description	Signature
000	Nov. 28, 2007	SCIP Version 1.0, approved by PSCC	
001	Jan. 19, 2010	2010 SCIP, approved by PSCC	
002	April 19, 2011	2011 SCIP, approved by PSCC	
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DRAFT

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EXECUTIVE OVERVIEW

The Arizona Statewide Communications Interoperability Plan (SCIP) serves as a reference for public safety officials by describing the status of interoperable communications throughout Arizona and by documenting the specific goals and objectives Arizona has established to improve public safety communications.

Arizona developed the initial version of the SCIP in 2007, beginning with a high-level plan introduced at a Statewide Interoperability Executive Committee (SIEC) meeting in July 2007. After a series of meetings and forums, this SCIP was approved by the Public Safety Communications Advisory Commission (PSCC) in an open meeting on November 28, 2007. In July 2008, oversight of the PSCC transitioned to the Public Safety Interoperable Communications (PSIC) Office. The PSIC Office identified the need to update the SCIP in order to address known gaps in the Plan and to document updated approaches to tackling statewide strategic communications initiatives. An updated version of the SCIP was approved by the PSCC in an open meeting on January 19, 2010 and has since been updated annually.

The PSCC, SIEC, and this Plan encourage local participation integral to Arizona's strategic planning efforts in support of interoperable communications. This SCIP addresses the short- and long-term goals of the PSCC, SIEC and PSIC, and contains the defined and actionable strategies required to implement the vision of interoperability that public safety and service agencies/organizations need in order to protect and serve the citizens of Arizona. The SCIP is divided into five sections:

1. **Introduction** – Introduces and defines the purpose of the Plan.
2. **Background** – Provides an overview of Arizona and its regions to set the context for the rest of the Plan. This overview includes summaries of major geographic, demographic, and infrastructure elements that impact interoperable communications across Arizona. The overview also describes Arizona's regional entities, including counties, tribes, Arizona Department of Homeland Security (AZDOHS) Homeland Security Regions, Urban Area Security Initiative (UASI) areas, and police, fire, and Emergency Medical Service (EMS) associations.
3. **Methodology** – Outlines the participatory methodology used to develop the SCIP. Cross-jurisdictional and cross-disciplinary involvement in the development and maintenance of this SCIP is achieved via several mechanisms:
    a. The PSCC and SIEC hold regular public meetings and workshops to discuss and make recommendations for advancing statewide communications interoperability.
    b. Standing workgroups of the PSCC and SIEC are tasked to address interoperability issues in detail.
    c. The PSIC Office supports all of these groups and receives recommendations from them regarding work plans related to the development of systems and strategies for providing interoperability for public safety communications.

   d. The PSIC Office meets regularly with its State agency partners and also supports a statewide Outreach Program providing regular and effective dialogue with Arizona public safety and service agencies/organizations.

4. **Current Statewide Assessment** -- In recent years, Arizona has commissioned and executed several studies to ascertain and document the current status of public safety communications statewide. These studies recognize successful endeavors that could be leveraged moving forward, and identify gaps hindering interoperability that need to be mitigated or rectified through future initiatives and planning efforts. This section describes the current status of Arizona's interoperable communications capabilities. Summaries of key findings are divided into five categories:
   a. Governance – the relationship of the various bodies in the interoperable communications governance structure, including the PSCC, SIEC, and the PSIC Office. Applicable Memoranda of Understanding (MOUs) and Memoranda of Agreement (MOAs) are described.
   b. Standard Operating Procedures (SOPs) – the process for developing statewide SOPs, requirements for National Incident Management System (NIMS) / Incident Command System (ICS) compliance, and identifying current SOPs for interoperable communications.
   c. Technology – a summary of the shared systems currently in operation in Arizona, shared channels that are available for public safety use, and gateways and radio caches in Arizona available to enhance interoperability.
   d. Training & Exercises – guidelines for Arizona's training and exercise opportunities, including exercise opportunities incorporating communications capabilities, Federal Emergency Management Agency (FEMA) courses related to communications, Communications Unit Leader (COML) and Communications Unit Technician (COMT) qualification and training processes, and additional communications training offerings.[1]
   e. Usage – information regarding the use of interoperable communications within Arizona generally assessed at a jurisdictional level rather than as an over-arching statewide process.
5. **Strategy** – lays out Arizona's strategy, both short-term and long-term, for improving interoperable communications by leveraging existing assets, agreements, and funding sources. Funding sources are identified, grant management guidelines are defined, and vision and mission statements for improving interoperability are introduced. Arizona's interoperability goals and objectives are defined, and linked to twelve strategic initiatives.

The SCIP provides the opportunity for all levels of government to come together and consolidate information regarding their communications needs, based on risk-benefit models projecting evolving future requirements. This Plan provides a mechanism for governments to identify shared issues and assess future common needs.

[1] This document references positions and titles within the Communications Unit (e.g., COML, COMT) that pertain to All-Hazards emergency response classifications; such references are not intended to reflect Red Card positions and titles, as recognized under National Wildfire Coordinating Group (NWCG) guidelines.

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1.0 INTRODUCTION

Before the Arizona (AZ) Public Safety Communications Advisory Commission (PSCC) was officially established, a group of individuals who believed Arizona should address interoperability as a statewide priority started meeting as an ad-hoc community of interest. In July 2004, the Governor and the Arizona State Legislature created the PSCC under Arizona statutes §41-3541 and §41-3542[2].

The newly legislated PSCC integrated the existing ad-hoc community of interest by creating the Statewide Interoperability Executive Committee (SIEC) as suggested by the September 11, 1996 report to the Federal Communications Commission (FCC) by the Public Safety Wireless Advisory Committee (PSWAC) that addressed best practices for providing interoperability among public safety entities. The Arizona SIEC is a five-member PSCC advisory committee who, along with their workgroups, represent a broad cross section of Arizona's public safety officials.

The 2001 and 2003 National Task Force on Interoperability characterized and documented the current state of communications systems and interoperability across the United States during times of crisis and the problems affecting public and private agencies responsible for responding to and mitigating such events. The identified problems included:

1. Incompatible and aging communications equipment
2. Limited and fragmented funding to support communications systems replacement or upgrades
3. Limited and fragmented communications system planning
4. Lack of or inadequate inter-agency coordination and cooperation
5. Inadequate coverage or reliability
6. Limited and fragmented radio spectrum availability.

While these findings have been identified previously and subsequently, acts of terror, violence, natural and other catastrophic events have continued to demonstrate, validate and drive home the need for a coordinated approach to facilitate the mitigation of these communications problems.

Beginning with a high-level plan introduced at the SIEC statewide meeting in July 2007, Arizona began developing the Statewide Communications Interoperability Plan (SCIP) to address these communications problems. Representatives of the Department of Homeland Security's (DHS) Office of Emergency Communications/Interoperable Communications Technical Assistance Program (OEC/ICTAP) reviewed the plan and facilitated the meeting. After a series of meetings and forums, this SCIP was approved by the PSCC in an open meeting on November 28, 2007.

[2] http://www.azpsic.gov/about/law.htm

A.R.S. §41-3541 and §41-3542[3] transitioned oversight of the PSCC to the Public Safety Interoperable Communications (PSIC) Office of the Arizona Department of Administration – Arizona Strategic Enterprise Technology (ADOA-ASET). The PSIC Office identified the need to update the SCIP in order to address known gaps in the Plan and to document updated approaches to tackling statewide strategic communications initiatives. The update process began in July 2009, culminating in an updated version of the SCIP, approved by the PSCC in an open meeting on January 19, 2010. Since then, the SCIP has been updated pursuant to the annual review cycle and submitted for approval to the PSCC as needed (see the Record of Change sheet for current version information).

The SCIP sustains the momentum created by the PSCC, SIEC and PSIC planning efforts by maintaining long-standing local, regional, tribal and State planning within a statewide process. The PSCC, SIEC, PSIC, and this Plan encourage local participation integral to Arizona's strategic planning process. This SCIP contains the short- and long-term goals of the PSCC, SIEC and PSIC. This SCIP therefore houses the defined and actionable strategies required to implement the vision of statewide access to interoperability needed to protect and serve the citizens of Arizona.

Throughout this document, "public safety and service agencies/organizations" will be used to refer to police, fire, and Emergency Medical Service (EMS) agencies, as well as other municipal, county, state, tribal, and federal agencies performing public safety or public service activities. Arizona may also determine that select non-governmental organizations (NGOs) performing public safety and/or service activities are incorporated into this definition on an as-needed basis.

SCIP Point of Contact

Arizona has designated Lisa Dee Meyerson as the point of contact (POC) for this document within the PSIC Office. Ms. Meyerson serves as the Statewide Interoperability Coordinator (SWIC).

For copies of this SCIP, and for questions, updates, deletions, or inclusions to this document, point of contact information is as follows:

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[3] http://www.azpsic.gov/about/law.htm

2.0 BACKGROUND

This section provides an overview of Arizona and its regions to set the context for the rest of the Plan. This overview includes summaries of major geographic, demographic, and infrastructure elements that impact interoperable communications across Arizona.

2.1 State Overview

2.1.1 Geography

Arizona, located in the southwestern United States, is bordered to the east by New Mexico, to the north by Utah, to the north and west by Nevada, to the west by California, and to the south by Mexico (see Figure 2.1). Additionally, the northeast corner of Arizona is part of the "Four Corners" region, along with Colorado, New Mexico and Utah.

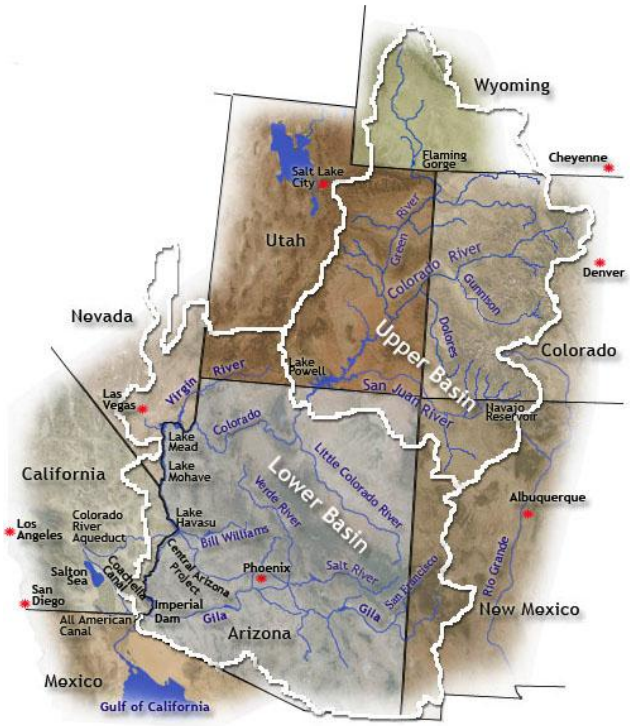


Figure 2.1: Arizona and Bordering States

Arizona measures approximately 400 miles in length, 310 miles in width, and has a total area of about 113,900 square miles, making it the sixth largest state in the United States. Arizona's water area is roughly 364 square miles, making it one of the driest states in the nation. The Colorado River meets the water and power needs of nearly 30 million people within its basin states and adjoining areas, including Mexico. Arizona shares water resources in the Lower Basin with Nevada and California (see Figure 2.2).

Arizona is composed of three distinct physiographic provinces that impact the design and implementation of public safety communications networks across the state:

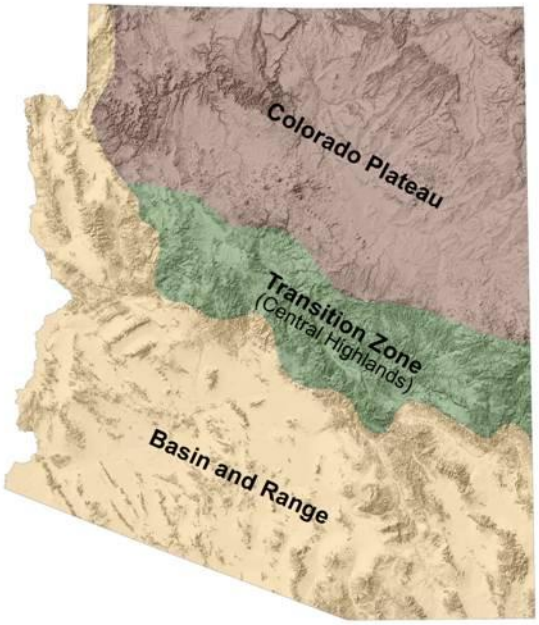


Figure 2.2: Physiographic Provinces of Arizona[4]

1. The Colorado Plateau is an area of flat-topped mesas, buttes and deeply incised canyons, with elevations ranging from 5,000 to 7,000 feet. It covers much of the northeastern area of Arizona.
2. The Basin and Range Province, with north-to-northwest-trending isolated mountain ranges rising abruptly from broad plain-like valleys or basins. Elevations range from near sea level in the desert areas to mountain ranges of 8,000 to 10,000 feet. This province covers most of the western and southern portions of Arizona.
3. The Transition Zone is a deeply dissected mountainous area between the two major provinces, characterized by small, isolated valleys or basins between the mountain blocks. This area is generally lower in elevation than the Plateau, with mountain ranges as high as the Plateau rim.

Each province has its own special set of requirements for protection, equipment, weather conditions, and environmental concerns.

2.1.2 Climate

Arizona's climate can be unforgiving, with winter low temperatures in higher elevations reaching -35° Fahrenheit (F) and summer high temperatures reaching over 120°F. Daily high to low temperatures can swing as widely as 60°F. The geographic realities detailed above, coupled with these severe climate concerns, make Arizona's overall environment challenging and unforgiving to public safety operations and communications alike.

2.1.3 Demographics

Arizona's population is growing rapidly, and Phoenix is one of the fastest-growing cities in the United States. The 2010 Census estimates the statewide population of Arizona at 6.4 million citizens[5]. The Phoenix metropolitan area (Maricopa County) having a population of 3.8 million and Pima County at 1 million residents. These two counties represent 75 percent of Arizona's population.

[4] Fenneman, NM and DW Johnson, 1946, Physiographic divisions of the conterminous US: GIS cover
[5] http://2010.census.gov/2010census/data/embedstate.html?state=AZ

2.1.4 Land Ownership

Private land owners possess less than 20 percent of Arizona's landmass. Arizona is home to 22 federally recognized Native American Tribes[6] that occupy a combined landmass of approximately 25 percent (21 million acres) of Arizona's land. There is also a significant amount (more than 28 million acres) of federal land in Arizona, underlying the importance of including both federal and tribal participants in the interoperable communication solutions deployed in the state. Federal land in Arizona is managed in large part by the United States Bureau of Land Management (BLM), National Forest Service, National Park Service, or Department of Defense (DoD).

The key national military bases in Arizona are:

1. Fort Huachuca, home to the U.S. Army Intelligence Center and School
2. Luke Air Force Base, home of the 56th Fighter Wing (the only F-16 Fighter pilot training facility)
3. Davis-Monthan Air Force Base, home of the 355th Fighter Wing, whose primary mission is to train A-10 pilots and provide close support and forward air control to ground forces worldwide
4. Yuma Proving Grounds, where the DoD runs ordnance testing
5. Marine Corps Air Station (MCAS) Yuma, home of the Marine Aircraft Group 13.

2.1.5 Critical Infrastructure

Arizona's critical infrastructure includes highways, bridges, international ports of entry, waterways, electric power plants (including nuclear facilities), airports, and telecommunications sites. Each of these are critical to supporting Arizona's standard of living and primary sources of income which include tourism, high-tech industries, defense industries, a rising number of retirement communities around the state, and the banking/finance sector.

Arizona has over 400 dams. Two federally-operated dams, Hoover Dam and Glen Canyon Dam are particularly noteworthy because each impacts the water supply and hydroelectric production of multi-state areas. Major reservoir storage systems are located on the Colorado, Salt, Verde, Gila, and Agua Fria Rivers. The Central Arizona Project is a 336-mile long system of aqueducts, tunnels, pumping plants and pipelines and is the largest single source of renewable water supplies in Arizona.

Arizona is also home to the largest nuclear power generation facility in the United States. The Palo Verde Nuclear Generating Station located about 55 miles west of central Phoenix has three units capable of generating nearly 4,000 megawatts of electricity.

2.1.6 Known Natural Disaster Hazards

Based on data compiled from county Emergency Operations Center (EOC) surveys since 2002, wildland and other types of fires comprise a significant proportion of Arizona disasters. Arizona also experiences impactful slow-rising and flash flooding caused by monsoons and

[6] http://www.indianaffairs.state.az.us/tribes_of_arizona.asp

microbursts. Although portions of the state lie in proximity to known fault lines, no earthquake in recorded history has caused deaths or injuries in Arizona.

2.1.7 International Border with Mexico

Arizona shares its 389 mile long southern border with Mexico. This international border includes six international crossing stations located at Nogales-Mariposa, Douglas, Lukeville, Naco, Sasabe and San Luis. Nogales-Mariposa alone sees almost $19 billion in trade annually representing 89% of all surface mode trade between Arizona and Mexico.

Four of Arizona's counties (i.e., Yuma, Pima, Santa Cruz, and Cochise) share a border with the Mexican State of Sonora. Local and state responders in these counties need to interoperate both with United States federal responders from agencies such as the U.S. Customs and Border Protection, Immigration and Customs Enforcement, Bureau of Alcohol, Tobacco, Firearms, and Explosives, and the Federal Bureau of Investigation, and with public safety officials in Mexico.

2.2 Regions/Jurisdictions

The following sections describe Arizona's regional divisions including counties, tribes, Arizona Department of Homeland Security (AZDOHS) Homeland Security Regions, Urban Area Security Initiative (UASI) areas; and police, fire, and EMS associations.

2.2.1 Counties

Arizona is comprised of 15 counties (Figure 2.3). Appendix A.1 lists major cities and towns within each county. Each county has an elected board of supervisors.

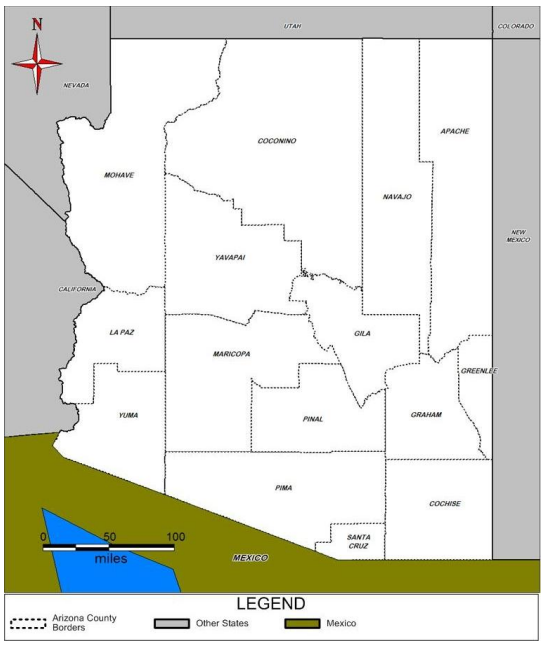


Figure 2.3: Arizona Counties

2.2.2 Tribes

Arizona contains 22 federally recognized Native American Tribes[7]. Figure 2.4 depicts the Arizona tribal and federal lands. Point of Contact information and land holdings for each tribal entity are located in Appendix B.

- Ak-Chin Indian Community
- Cocopah Tribe
- Colorado River Indian Tribes
- Fort McDowell Yavapai Nation
- Fort Mojave Tribe
- Fort Yuma-Quechan Tribe
- Gila River Indian Community
- Havasupai Tribe
- The Hopi Tribe
- Hualapai Tribe
- Kaibab-Paiute Tribe
- Navajo Nation
- Pascua Yaqui Tribe
- Pueblo of Zuni
- Salt River Pima-Maricopa Indian Community
- San Carlos Apache Tribe
- San Juan Southern Paiute
- Tohono O'odham Nation
- Tonto Apache Tribe
- White Mountain Apache
- Yavapai-Apache Nation
- Yavapai-Prescott Indian Tribe

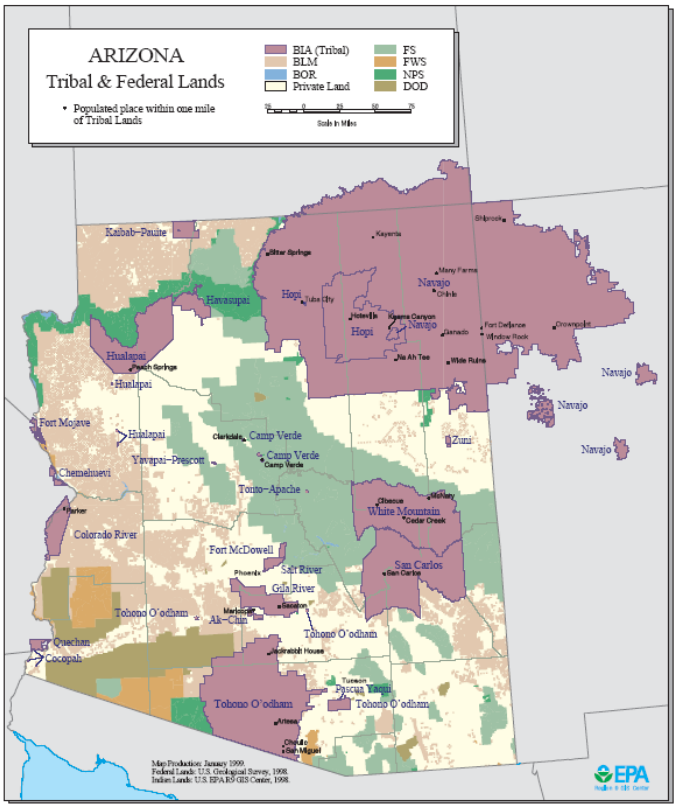


Figure 2.4: Arizona Federal and Tribal Lands

2.2.3 Homeland Security Regions

Pursuant to §41-4258 of the Arizona Revised Statutes, the AZDOHS Regional Advisory Councils (RACs) are tasked with developing, implementing, and maintaining regional homeland security initiatives in each of five Homeland Security Regions. The regions, grouped politically around county lines, represent Arizona's geographical divisions for planning and coordination purposes as shown in Figure 2.5. RACs collaborate with other councils and organizations to ensure the successful integration of homeland security programs and initiatives. Among other functions, RACs make recommendations to the AZDOHS on the allocation of Homeland Security grant monies to eligible entities.

[7] http://azcia.gov/tribes_of_arizona.asp

Each RAC is composed of:

- A fire service representative from an urban or suburban area within the region
- A fire service representative from a rural area in the region
- A police chief
- A county sheriff
- A tribal representative
- An emergency manager
- A mayor
- A county supervisor
- A representative from the Department of Public Safety
- A public health representative
- Four at-large positions.

Figure 2.5: Arizona Homeland Security Regions

2.2.4 UASI Areas

Currently, the Phoenix Urban Area and Tucson Urban Area are designated as Arizona's UASI regions. The Phoenix UASI encompasses all of Maricopa County, which is also the entire Central Homeland Security Region. Appendix A.2 lists the associated municipalities within the Phoenix UASI area. The Tucson UASI encompasses all of Pima County in the South Homeland Security Region. Appendix A.2 lists the associated municipalities within the Tucson UASI area. Points of Contact for both UASI regions are located in Appendix C.

2.2.5 Police, Fire, and EMS Associations

As of 2011, Arizona has approximately 170 law enforcement agencies[8], 255 fire districts[9], 78 ground ambulance companies, and 18 licensed air ambulance companies.

As of 2011, Arizona has approximately 15,000 sworn law enforcement officers and 9,000 correctional service officers.[10] Arizona has approximately 11,524 certified Basic Emergency Medical Technicians (EMTs), 40 certified intermediate EMTs and 5,488 certified Paramedics[11].

2.2.6 Bureau of Emergency Medical Services Regions

The Arizona Department of Health Services Bureau of Emergency Medical Services divides Arizona into four primary regions. These regions are grouped along mutual aid response agreement lines that recognize geographical and topographical realities to better foster the ability for responders within each region to regularly collaborate with one another.

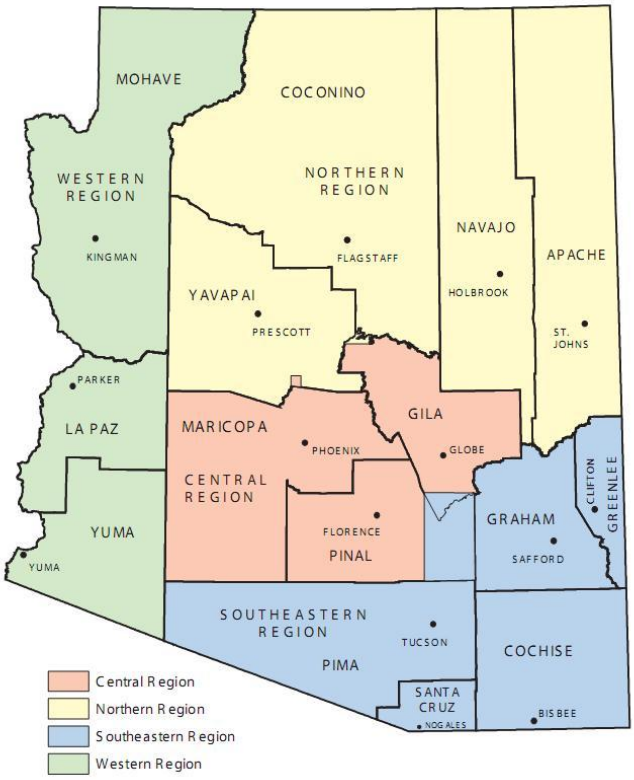


Figure 2.6: Bureau of Emergency Medical Services Regions

[8] http://www.azpost.state.az.us/
[9] http://www.dfbls.az.gov/
[10] http://www.azpost.state.az.us/
[11] http://www.azdhs.gov

3.0 METHODOLOGY

In 2001, an ad-hoc community of interest began to develop a strategy for interoperable communications for Arizona. These community hosted meetings[12] were attended by multiple disciplines and levels of government, including representation from state, county, city, district, tribal, and federal governments, as well as non-governmental entities. By 2004, the Arizona State Legislature established the PSCC as a Commission (see Arizona statutes A.R.S. §41-3541 and §41-3542[13]), and the Governor appointed commissioners. Appointees were chosen to provide broad representation from jurisdictions, public safety disciplines and interest groups from across Arizona.

Beginning with a high-level plan introduced at the SIEC statewide meeting in July 2007, Arizona began developing the SCIP to address these communications problems. Representatives of the Department of Homeland Security's (DHS) Office of Emergency Communications/Interoperable Communications Technical Assistance Program (OEC/ICTAP) reviewed the plan and facilitated the meeting. After a series of meetings and forums, Arizona's first SCIP was approved by the PSCC in an open meeting on November 28, 2007.

Cross-jurisdictional and cross-disciplinary involvement in the development and maintenance of the SCIP is achieved via several mechanisms. The PSCC and SIEC hold regular public meetings and workshops to discuss and make recommendations for advancing statewide communications interoperability. Standing workgroups of the PSCC and SIEC are tasked to address interoperability issues in detail. The PSIC Office supports all of these groups and receives recommendations from them regarding work plans related to the development of systems and strategies for providing interoperability for public safety communications. The PSIC Office also meets regularly with its State agency partners and supports a statewide Outreach Program providing regular and effective dialogue with Arizona public safety and service agencies/organizations. Finally, the Manager of the PSIC Office serves as Arizona's Statewide Interoperability Coordinator, participating in communications interoperability advancement efforts at the regional and national level.

The activities outlined above create a repository of information within the PSIC Office regarding Arizona's needs with respect to emergency communications interoperability. The PSIC Office integrates the information into specific initiatives and supporting objectives, and presents them to the PSCC and SIEC for discussion and approval. When approved, these initiatives and objectives form the basis for updating the SCIP. The PSCC annually reviews the SCIP for possible update, and implementation work on the initiatives then begins according to the plans outlined in the document.

[12] http://www.azpsic.gov/meetings/minutes.htm
[13] http://www.azpsic.gov/about/law.htm

3.1 SCIP Development History & Process

The Department of Public Safety (DPS) introduced the SCIP process, including a high-level draft plan, at a statewide meeting in July 2007. The SCIP project team began interviewing key individuals to determine the immediate needs, goals, and objectives of the PSCC, SIEC and communities of interest. The project began with assembling all available reports the PSCC and others had completed previously to help understand all related efforts and the steps Arizona had taken to that point.

The bodies of work reviewed included:

1. A study conducted by RCC Consultants that identified the need to create an interoperability suite of cross-banded mutual aid channels (AIRS)
2. A statewide Needs Analysis, conducted by the Macro Corporation
3. The Statewide Wireless Public Safety Solution Concept of Operations (ConOps), written by Gartner, Inc.

Based on the information that had been gathered, the team created a Gap Analysis and Closure Plan outlining what was required to complete the SCIP. The project team posted subsequent SCIP drafts on the PSCC/SIEC website where state, local, tribal, federal and non-governmental public safety entities were offered an opportunity to contribute their comments and input. The team also provided each of Arizona's RACs and EOCs with draft copies of the SCIP and asked them to participate in this process.

Thereafter, the PSCC conducted two additional forums, one in September and another in October of 2007. These public meetings were formally noticed and open to any interested party. After each meeting, the team edited the SCIP accordingly and placed it on the PSCC/ SIEC website to ensure availability to the largest audience possible for review. The PSCC held a Special Meeting on November 28 to review the final draft of the SCIP. On November 28, 2007, the PSCC approved Arizona's first SCIP.

In October 2008, management of the PSCC was transferred from the PSCC Support Office at DPS to the PSIC Office.[14] In the fall of 2008, the PSIC Office initiated a public review process to address the first major revision to the 2007 SCIP. As part of this process, the PSIC Office conducted statewide stakeholder working sessions in November 2008[15] and February 2009[16] to garner feedback and input from the first responder community. Over 200 participants from multiple jurisdictions and disciplines were represented during these sessions. In addition, the PSIC Office reviewed the Target Capabilities Assessment (TCA) commissioned by the AZDOHS in 2009. The PSCC approved a revised set of strategic initiatives and supporting objectives on May 19, 2009 and approved an updated SCIP at an open meeting on January 19, 2010.

Subsequent reviews are conducted in accordance with the methodology detailed in Section 3.2.

[14] http://www.azpsic.gov/about/transition.htm
[15] http://www.azpsic.gov/meetings/2008/nov/Working_Session_Notes_11202008_FINAL.pdf
[16] http://www.azpsic.gov/meetings/2009/feb24/SCIPWorkshopMeetingReport.pdf

3.2 Continuing Plans for SCIP Update

The SCIP is a living document that is intended to undergo an annual review. Arizona's SWIC, as manager of the PSIC Office, is tasked with executing that review. The current version of the SCIP and all related documents, reports and communications are posted on the PSIC Office website[17].

The PSCC holds regular stakeholder workshops and informational meetings to keep participants in the SCIP review process updated and to solicit input for planned reviews. Further, the PSIC Office has implemented an Outreach Program designed to incorporate input from entities not historically represented in PSCC or SIEC meetings (see Section 4.5.4).

The PSCC Chair will notify all PSCC members of an impending SCIP review via the published agenda for regularly scheduled PSCC meetings. Additionally, the PSCC membership and PSIC Office will notify the larger community of interest of the SCIP review through outreach to its extensive database of interested parties. Input to the SCIP is not limited to those appointed to serve on a committee; rather it is open to all stakeholders during public review periods.

At the close of the stated response and input period, a review of the SCIP will be placed on the agenda for the next PSCC meeting. During this open meeting, the suggested changes will be discussed by the full PSCC membership and approved or disapproved.

Appendices will be updated as needed by the PSIC Office. Changes made to the body of the document will require an approval vote by the PSCC.

Pursuant to current configuration management protocols, the SCIP Record of Change log will be updated and a new version date assigned whenever the SCIP is updated. The updated SCIP will then be distributed to appropriate stakeholders via e-mail, website posting or available directly from the SCIP POC (see Section 1).

3.3 PSIC Grants Consideration Methodology

All funding through the 2007 Public Safety Interoperable Communications (PSIC) grant is being utilized in support of the needs and strategic plans identified in the SCIP (see Section 5). Section 5.8 specifically describes the initiatives that are the highest priorities for funding, including the expansion of the Strategic Technology Reserve (STR) to augment and enhance statewide interoperability.

The Arizona State Administrative Agency (SAA) is the AZDOHS. The AZDOHS solicited input from state, local and tribal public safety agencies and authorized nongovernmental organizations via briefings to the Arizona Homeland Security RACs. In addition, the AZDOHS sent emails to public safety stakeholders, posted grant solicitation information on their website, and facilitated PSIC-related teleconferences with appropriate entities.

To solicit Investment Justifications, or justification for investing federal grant dollars, the AZDOHS used an application format that local jurisdictions and State agencies were familiar with and had previously used in the Homeland Security Grant Program application process.

[17] http://www.azpsic.gov/

This tool, (i.e., the Application Workbook) served a similar function as the Investment Justification template.

The Application Workbook was developed with information specific to Arizona's SCIP based on federal PSIC guidance. The Application Workbook submissions gave AZDOHS the information necessary to determine how eligible jurisdictions were able to support the SCIP and what mechanisms were necessary to ensure interoperability within their areas and throughout Arizona.

As part of the application process, AZDOHS requested that local applicants provide applicable Memoranda of Understanding, when requesting funding on behalf of investments to be managed by the State.

After the Application Workbooks were received, the PSCC Support Staff and the Interoperability Workgroup (IWG) reviewed the submissions. This review helped the AZDOHS determine the critical connection between Application Workbooks and required elements in the SCIP based on federal guidance for PSIC grant funding.

The summarized Application Workbook information was integrated into Arizona's Investment Justification narratives, included with the Memorandums of Understanding (MOUs) obtained for specific projects, and factored into the SCIP submitted in December 2007.

The RACs reviewed the Application Workbooks and made recommendations to the AZDOHS Director pursuant to A.R.S. § 41-4258. Lists of the recommended projects were also forwarded to the State Homeland Security Coordinating Council for comment. Once the reviews and recommendations were completed, and the projects were approved by Federal DHS, the AZDOHS Director made the final award decisions.

3.4 Participating Agencies and Points of Contact

It is Arizona's practice to include state, local, federal, tribal, and NGO representatives during the interoperability planning process. We actively encourage and include all disciplines in all phases of the SCIP development/update process through open public meetings of the PSCC and SIEC; outreach to local meetings; working group meetings; and electronic newsletters to interested parties. Appendix A.3 identifies the public safety and service agencies/organizations that helped develop the SCIP in 2007. Over 200 participants from multiple jurisdictions and disciplines have participated in SCIP revision efforts including SCIP Implementation Workshops and stakeholder working sessions. Names and contact information from these sessions can be obtained from the PSIC Office[18]. Appendix E identifies the membership of the PSCC and SIEC.

The PSCC and SIEC will continue to seek support and participation from public safety and service agencies/organizations, including additional local and tribal government representation and federal military and non-military personnel. Arizona is committed to making this on-going process as inclusive as possible.

[18] http://www.azpsic.gov/

4.0 CURRENT STATEWIDE ASSESSMENT

In recent years, Arizona has commissioned and executed several studies[19] to ascertain and document the current status of public safety communications statewide, to identify successful endeavors that could be leveraged moving forward, and to discover gaps hindering interoperability that need to be mitigated or rectified through future initiatives and planning efforts.

The following sections synopsize key findings from these assessments to describe the current status of Arizona's interoperable communications capabilities. Summaries of key findings are divided into five categories (governance, standard operating procedures, technology, training & exercises, and usage), as defined in the Department of Homeland Security (DHS) Interoperability Continuum[20] (Figure 4.1 below).

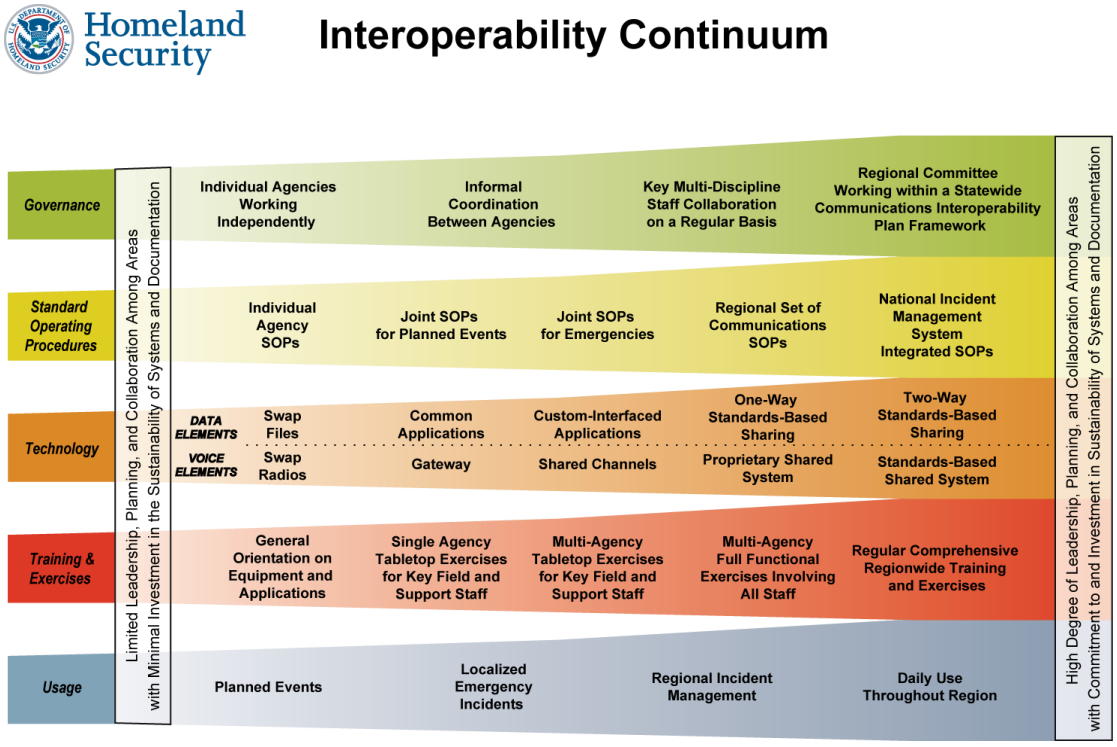


Figure 4.1: Interoperability Continuum

[19] http://www.azpsic.gov/library/reports/
[20] http://www.safecomprogram.gov/oecguidancedocuments/continuum/default.aspx

4.1 Governance

A multi-level structure governs Arizona interoperable communications (Figure 4.2). This structure consists of the PSCC, the SIEC, and workgroups. The PSCC and SIEC are managed and staffed by, and in turn advise, the PSIC Office (Key partner agencies include the AZDOHS and the DPS).

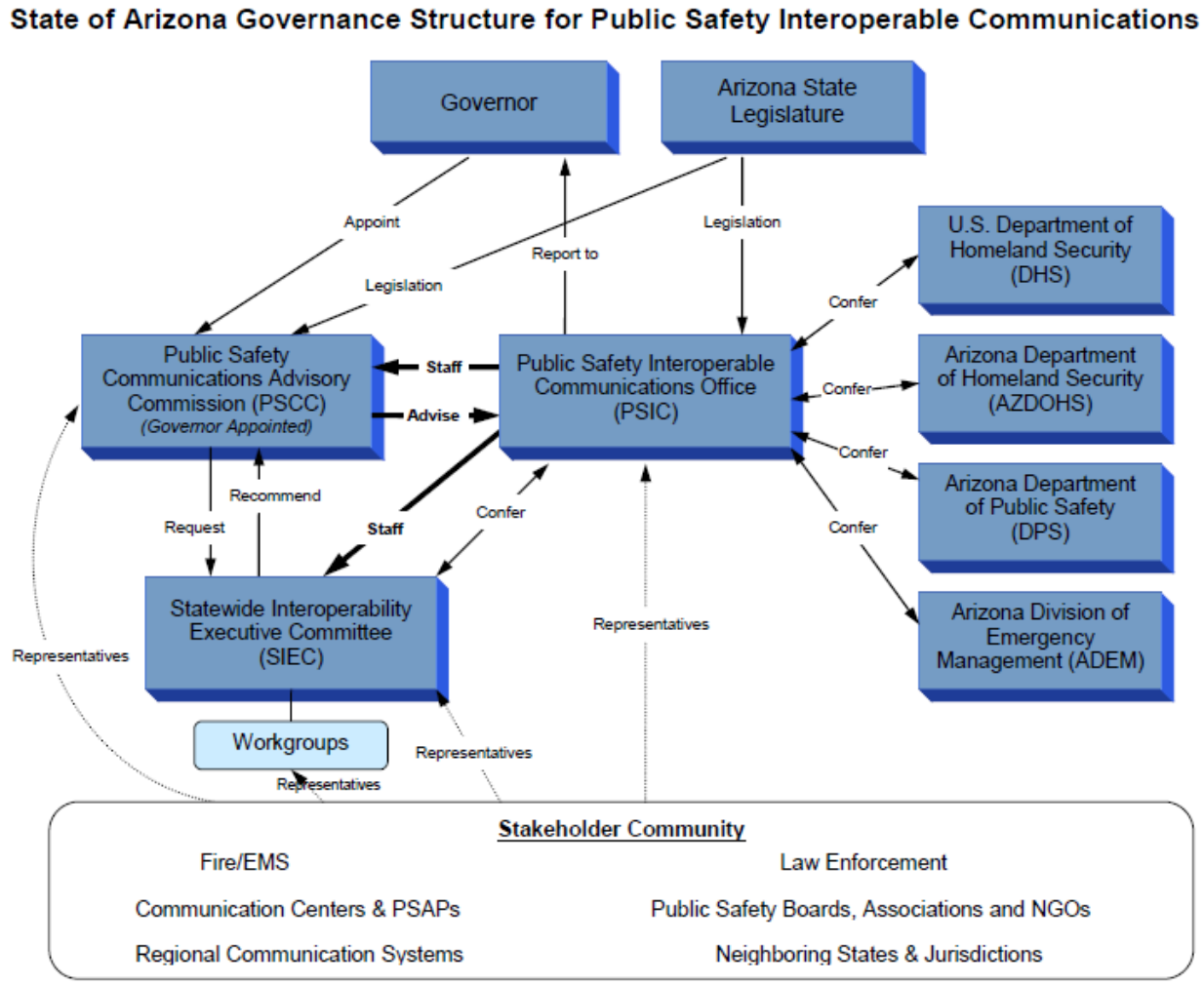


Figure 4.2: Arizona Organizational Model

The stakeholders involved in public safety communications interoperability involve all members of the public safety community, including without limitation:

1. City and County Managers
2. Communication Center (911) and Public Safety Answering Point (PSAP) Managers and Staff
3. Elected Officials
4. Emergency Managers and Operations Level Personnel
5. Members of Police/Fire Boards
6. Members of PSCC, SIEC and associated Workgroups
7. NGOs with a public safety/service mission
8. Police, Fire & EMS Executive, Operational and Technical/Communications Staff
9. Public Information Officers
10. Public Safety & Government Associations
11. Regional and Border Initiative Participants - federal, multi-state, local, and tribal
12. Regional System Administrators
13. UASI Members

4.1.1 Public Safety Interoperable Communications (PSIC) Office

The PSIC Office[21] within ADOA-ASET is charged with advancing interoperable communications in Arizona and supporting the PSCC and SIEC in performance of their missions.

Statutory Framework

A.R.S. §41-3542[22] sets forth the powers and duties of the PSIC Office and the PSCC. The PSCC makes recommendations to the PSIC Office regarding the development and maintenance of work plans to outline areas of work to be performed and appropriate schedules. Specifically, §41-3542 reads:

> *The Arizona PSCC shall make recommendations to the agency regarding the development and maintenance of work plans to outline areas of work to be performed and appropriate schedules for at least the following:*
>
> 1. *The development of a standard based system that provides interoperability of public safety agencies' communications statewide.*
> 2. *The promotion of the development and use of standard based systems.*
> 3. *The identification of priorities and essential tasks determined by the advisory commission.*
> 4. *The development of a timeline for project activities.*

[21] http://www.azpsic.gov/
[22] http://www.azpsic.gov/about/law.htm

5. *Completion of a survey of existing and planned efforts statewide and benchmark against similar efforts nationally.*
6. *Providing support for the state interoperability executive committee.*
7. *Establishing committees and work groups as necessary.*

PSIC Vision

Arizona's public safety and service agencies/organizations, at all levels of government and within non-governmental organizations, have access to quality interoperable communication systems, are adequately trained, and utilize such systems effectively in multi-disciplinary, multi-jurisdictional incident response.

PSIC Mission

The PSIC Office serves as a leader for Arizona in advancing public safety communications interoperability.

PSIC Key Priorities

The key priorities of the PSIC Office are:

1. Serve as Arizona's Interoperability Representative – As the State's principal communications interoperability contact to State, federal, local, tribal and non-governmental agencies and organizations, communicate with appropriate authorities regarding resources needed by Arizona; educate stakeholders regarding best practices and resources available to them; and participate in key multi-state, regional, national and border initiatives with partners
2. Advancing Arizona's SCIP – Support interoperable communications initiatives through planning, consulting and/or implementation or through oversight and monitoring of projects managed by others
3. Supporting Funding & Preparing Reports – Seek funding to ensure program sustainability and report performance measures to federal and State government
4. Logistics & Operations – Support Commission, Committee, Workgroups and task force meetings, develop action plans, Request for Proposals (RFP), request for quotation (RFQ)s, and other communications to support project management and operations
5. Stakeholder Engagement & Interactions - Engage public safety stakeholders statewide to share information, identify needs and resources, participate in training and exercises, and ensure that feedback is reaching the PSCC and SIEC

PSIC Office Annual Plan

The PSIC Office Annual Plan[23] serves as guidance for the activities of the PSIC Office and is intended to be a companion document to this SCIP. The PSIC Office Plan describes how the PSIC Office and its staff will operate to advance the SCIP and interoperability statewide. The

[23] http://www.azpsic.gov/initiatives/default.htm

PSIC Office seeks advice from the PSCC and SIEC on the content of and revisions to the PSIC Office Annual Plan.

4.1.2 Public Safety Communications Advisory Commission (PSCC)

The Arizona PSCC is legislatively enabled as an advisory body for statewide interoperability efforts. The PSCC was organized in 2000 and its charter established into state law in 2004 by the Arizona State Legislature under A.R.S. §41-3541 and §41-3542[24].

The Commission was originally established within the DPS but was transferred to the PSIC Office in 2008. The Commission reflects a broad, multi-disciplinary community of public safety and service agencies/organizations from across Arizona. It is intended to provide a forum to discuss public safety communications initiatives developed at the state and regional level. Additionally, the PSCC provides a mechanism for coordinating public safety communication issues among local, state, federal, and other agencies operating within Arizona.

The PSCC consists of 15 governor-appointed members reflecting multi-disciplinary public safety and service agencies/organizations including representatives from the DPS, police, sheriff's office, fire, EMS, and communications entities, along with the AZDOHS and ADOA-ASET. Appointments to the Commission are made so that the existing five Homeland Security Regions in Arizona are as equally represented as possible. Members serve three year terms and must be confirmed by the Arizona State Senate. The ADOA Director or his designee serves as the PSCC Chair. Membership of the PSCC is listed in Appendix E.

Meeting Schedule

The PSCC has held regular open and public meetings since its inception. The PSCC meets at least quarterly, and more often if necessary. All meetings are publicly noticed and conducted in accordance with Arizona open meeting laws (A.R.S. §38-431). Following each session, public meeting notes are available[25].

4.1.3 Statewide Interoperability Executive Committee (SIEC)

The PSCC formed the SIEC as an advisory committee. The SIEC also holds authority over 700 Megahertz (MHz), Very High Frequency (VHF), and Ultra High Frequency (UHF) interoperability frequencies in Arizona. It is an interactive working group that encourages broad participation from public safety and service agencies / organizations as part of its workgroups. Membership of the SIEC is listed in Appendix E.

Workgroups

The PSCC and SIEC are supported by workgroups composed of volunteers from public safety and service agencies / organizations[26].

[24] http://www.azpsic.gov/about/law.htm
[25] http://www.azpsic.gov/meetings/minutes.htm
[26] http://www.azpsic.gov/about/commission.htm

The **Governance Workgroup** evaluates and makes recommendations to the PSCC on providing a unified approach across multiple disciplines and jurisdictions to govern interoperable communications.

The **Technical Workgroup** evaluates and makes recommendations from a technical perspective to the SIEC on Policies, Standards and Procedures. Examples of issues tasked to this workgroup might include issues surrounding spectrum management and utilization of the Communication Assets Survey and Mapping Tool (CASM).

The **Operational Workgroup** evaluates and makes recommendations from an operational perspective to the SIEC on MOUs, SOPs, and on Policies, Standards and Procedures. This Workgroup might also be tasked with making recommendations on Training and Exercises, and on Outreach.

The **NIMS Communication Unit (NIMS-CU) Workgroup** reviews the qualifications of applicants seeking Arizona Regional recognition or renewal of recognition for All-Hazards positions within the ICS Communications Unit and awards recognition to qualified applicants. The Workgroup is also responsible for maintaining a body of policies and procedures related to its work subject to SIEC approval.

The **Interoperable Channels Plan Workgroup** evaluates national interoperable trends and standards and establishes the Arizona Statewide Interoperable Channels Plan and Programming Guidance and any updates to that plan.

The **Arizona Public Safety Broadband Network (AZPSBN) Workgroup** develops State-wide standards for interoperability on the National Public Safety Broadband Network (NPSBN) and work with the Arizona Public Safety community to plan how Arizona will interact with the NPSBN.

The **Policies, Standards and Procedures (PSP/SOP) Workgroup** develops and promotes the framework for policy, standards and procedures documentation. The Workgroup is also working on Regional level PSP/SOP documentation templates.

The **Arizona Interagency Radio System (AIRS) Workgroup** evaluates and makes recommendations to the SIEC on AIRS related issues. Examples of issues tasked to this workgroup might include development of AIRS related PSPs, issues surrounding AIRS Channel Assignments, deployment of AIRS assets, and development of an improvement and sustainability plan for AIRS.

Meeting Schedule

SIEC meetings are scheduled to occur between meetings of the PSCC. This schedule enables the PSCC to guide the work of the SIEC and allows the SIEC and its workgroups time to progress on that work before the next PSCC meeting. The SIEC's meeting schedule is subject to change based upon the work and needs of the PSCC and requirements of the committee. All meetings are publicly noticed and conducted in accordance with Arizona open meeting laws (A.R.S. §38-431). Following each session, meeting notes are publicly available[27].

[27] http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/38/00431.htm&Title=38&DocType=ARS

4.1.4 Applicable Interoperable Communications MOUs and Other Agreements

AIRS

AIRS is a suite of full-time, cross-banded (i.e., UHF, VHF, and 800 MHz) mutual aid channels designated specifically for multi-agency use across the State of Arizona. Agencies and organizations wishing to operate on AIRS must sign an MOU with DPS, the agency holding the licenses for AIRS frequencies. The MOU contains the purpose, authority, applicability, and understanding of the agreement. It requires an authorized signature of the User Agency and the Manager of the DPS Wireless Systems Bureau (WSB). Additionally, it requires the user agency to disclose the number of subscriber units and the channels on which those units will function.

Arizona Mutual Aid Compact

The Arizona Mutual Aid Compact[28] (AZMAC) is entered into by and among the signatory political jurisdictions within Arizona and the Arizona Department of Emergency and Military Affairs (DEMA). While the Compact is not specifically communications-focused, it allows signatories[29] to make a request for any emergency management resource, including communications resources, and provides a formal framework for dispatching mutual aid assistance to any affected area in accordance with local ordinances, resolutions, emergency plans or agreements. Contracting authority for political subdivisions of Arizona for this Compact is based upon A.R.S. § 26-308, which provides that each county and incorporated city and town of Arizona may appropriate and expend funds, make contracts and obtain and distribute equipment, materials and supplies for emergency management purposes. Tribal contracting authority is in accordance with each tribe's laws. Jurisdictions who have approved the AZMAC have agreed to share resources under mutual aid request, including communications resources.

Additional Agreements

In accordance with A.R.S. Chapter 2, Article 1, § 26-303 (D) "*State emergency plans shall be in effect in each such political subdivision of the state. The governing body of each such political subdivision shall take such action as is necessary to carry out the provisions thereof, including the development of additional emergency plans for the political subdivision in support of the state emergency plans.*" Arizona Division of Emergency Management (ADEM)'s Preparedness Section requests each County to submit the latest version of their County Plans in order to keep them on file for use by ADEM personnel.

[28] http://www.dem.azdema.gov/logistics/docs/mutualaid/Final_AZ_Mutual_Aid_Compact08.pdf
[29] http://www.dem.azdema.gov/logistics/docs/mutualaid/signatories.pdf

4.1.5 Federal & Regional Governance Groups

Arizona participates in regional groups working to improve communications interoperability:

- The Southwest Border Communications Working Group works to identify and leverage infrastructure-sharing opportunities and enhance interoperability among federal, state, local, and tribal agencies along the U.S.-Mexico border.
- The Four Corners Homeland Security Coalition (R4C) Coalition involves tribes and all counties located near the intersection of the Four Corners area where Colorado, Utah, New Mexico, and Arizona meet. The R4C Coalition is addressing interoperable communications, information and intelligence sharing, and the protection of critical infrastructure and key resources regionally, through an all-hazard, multi-discipline, cross-jurisdictional approach.

A number of federal, regional, and National organizations are involved in public safety communications governance issues. These groups include:

- Federal Communications Commission (FCC)
- Federal Department of Homeland Security (DHS) Office of Emergency Communications (OEC)
- Federal Emergency Management Agency (FEMA)
- FEMA Region IX Regional Emergency Communications Coordination Working Group (RECCWG)
- National Telecommunications and Information Administration (NTIA)
- First Responder Network Authority (FirstNet)
- National Public Safety Telecommunications Council (NPSTC)
- National Native American Law Enforcement Association (NNALEA)
- National Council of Statewide Interoperability Coordinators (NCSWIC)
- NCSWIC Executive Committee
- OEC Region IX Regional Interoperability Council (RIC)

4.2 Standard Operating Procedures (SOPs)

Arizona is enhancing its incident planning and response by enabling and improving communications among the local, state, tribal and federal government's public safety and service agencies/organizations. A critical component of this process is the development and implementation of SOPs. SOPs are defined as formal written guidance or instructions for public safety personnel to follow as they respond to incidents or events. These SOPs typically include operational and technical components that enable public safety professionals to coordinate their response within and/or across disciplines, agencies, and jurisdictions.

Individual agencies statewide develop and maintain their own SOPs for agency-specific communications response. In addition, each county maintains a series of SOPs on-file between its EOC and the State. These SOPs are supported by MOU and Continuity of Government (COG) Plans that are also maintained by the county EOCs.

At the regional and UASI level, Arizona is developing Strategic Communications Migration Plans (SCMPs) (Formerly Regional Interoperable Communications Plans or RICPs), Tactical

Interoperable Communications Plans (TICPs) and is in the process of developing SOPs for statewide communications assets, including AIRS and the Strategic Technology Reserve. SOPs are further detailed in Section 4.2.3.

4.2.1 SOP Development Process

SOPs are developed in a variety of ways across Arizona. Individual agencies and localities are empowered to develop their own communications SOPs related to their individual assets or systems. SOPs related to interoperable communications are frequently developed by leveraging relationships between members of the involved agencies or jurisdictions. SOPs designed to address statewide assets or systems are developed in collaboration with the PSCC or SIEC. These groups allow representatives from across Arizona to participate in the SOP development and approval process to ensure that procedures that may impact jurisdictions statewide are developed through a collaborative and fair process.

Arizona, and specifically the PSIC Office, is developing protocols to ensure that SOPs related to statewide interoperable communications systems are maintained and updated on a regular basis and that the latest releases of those SOPs are readily available on the PSIC website. The Outreach Program managed by the PSIC Office will continually work to ensure that public safety professionals at all appropriate levels are aware of and trained on these SOPs.

4.2.2 National Incident Management System (NIMS) Compliance

Homeland Security Presidential Directive 5 (HSPD-5)[30], *Management of Domestic Incidents*, directed the development and administration of NIMS. Originally issued on March 1, 2004, by the DHS, National Incident Management System (NIMS) provides a consistent nationwide template to enable federal, state, tribal, and local governments, NGOs, and the private sector to work together to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity.

NIMS represents a core set of doctrines, concepts, principles, terminology, and organizational processes that enables effective, efficient, and collaborative incident management. Communications interoperability allows emergency management/response personnel and their affiliated organizations to communicate within and across agencies and jurisdictions via voice, data, or video in real time, when needed, and when authorized. It is essential that these communications systems be capable of interoperability, as successful emergency management and incident response operations require the continuous flow of critical information among jurisdictions, disciplines, organizations, and agencies.

Arizona Division of Emergency Management (ADEM) is responsible for providing and coordinating technical assistance to local entities regarding NIMS to ensure statewide compliance in accordance with Arizona Governor's Executive Order 2007-23[31] (see Section 5.6 and Appendix D). In Arizona, each agency is responsible for maintaining NIMS compliance through a performance based process. Specific to communications, each agency must be able to demonstrate that their communication systems are interoperable, address plain language

[30] http://www.dhs.gov/xabout/laws/gc_1199894121015.shtm#1
[31] http://azmemory.lib.az.us/cdm4/item_viewer.php?CISOROOT=/execorders&CISOPTR=631&CISOBOX=1&REC=12

use, present consistent and accurate information, and use common and consistent terminology. IS-704, NIMS Communications and Information Management is a class to introduce agencies to the Communications and Information Management Component of NIMS. Participating agencies annually complete a self-assessment using the NIMS Compliance Assistance Support Tool (NIMSCAST) provided by FEMA National Integration Center - Incident Management Systems Division. The self-assessment is used as a baseline to determine current strengths and identify areas of weakness in their on-going efforts to continue NIMS integration.

AZDOHS requires an agency to complete the NIMSCAST Survey and remain compliant in order to receive grant funding from available federal DHS grant programs. ADEM provides general outreach and education to agencies in the use of the NIMSCAST Survey Tool.

In 2005, ADEM executed a contract for an independent third party review of respective State and County Emergency Operations Plans. Review results found full compliance with NIMS at the state and local government level. All non-emergency response state agencies automatically come under the State Emergency Response and Recovery Plan and therefore under ADEM's State NIMS Integration Efforts.

4.2.3 Interoperable Communications SOPs

The PSCC is legislatively charged with providing recommendations to the PSIC Office on the development of standards based systems that provide interoperability between public safety and service agencies/organizations statewide. It is therefore the body tasked with approval of statewide SOPs. Because the PSIC Office is managed by the Arizona SWIC, the development of the SOPs is well aligned and prioritized with other statewide initiatives.

Several entities in the public safety interoperable communications governance structure play a role in the development of statewide SOPs. The Stakeholder Resource Pool provides subject matter expertise. The Technical and Operational Workgroups of the SIEC provide state and local practitioners throughout Arizona who contribute practical input and guidance.

From initial draft to final document, statewide SOPs are discussed in public meeting forums and stakeholder feedback is incorporated throughout the development process. The Outreach Program managed by the PSIC Office creates awareness of the development work and assists with efforts to publicize and provide education regarding the SOPs.

Following approval, all SOPs are posted on the PSIC Office website[32]. Statewide SOPs of note are detailed below.

AIRS SOP[33]

The AIRS SOP is intended to provide an overview of the AIRS system and to inform monitoring, testing, dispatcher and user actions regarding these channels. While the SOP was in development, the PSCC opted to include some information and recommendations about

[32] http://www.azpsic.gov/library/standards/
[33] http://www.azpsic.gov/library/airs/

locally available national interoperability channels as well. The AIRS SOP has been updated to include the latest advances in the Arizona Interoperable Channels Plan.

Arizona Interoperable Channels Plan - Priority Programming Guide

The Arizona Interoperable Channels Plan establishes requirements and/or recommendations for programming of statewide interoperable channels into subscriber units and to provide guidance on the use of the interoperable channels during day-to-day and emergency use. The plan provides PSCC/SIEC requirements and recommendations for the VHF, UHF and 700 MHz interoperability spectrum. Administration of the interoperable portion of the 800 MHz spectrum is the responsibility of the 800 MHz NPSPAC Arizona Regional Review Committee. Therefore, while 800 MHz interoperability information is included for purposes of providing a complete reference, 800 MHz users are referred to the Arizona 800 MHz Regional Plan (Region 3 PR Docket 91-143) for requirements and recommendations regarding that spectrum band.

The Priority Programming Guide is intended to standardize and increase interoperable communications throughout the state in the VHF, UHF, 700 and 800 MHz bands. It is suggested the each agency incorporate these channels into their channel plan the next time their radios are programmed, but no later than the narrowbanding deadline of January 1, 2013.

Arizona Communications Unit Training Coordination Procedure

The Arizona Communications Unit Training Coordination Procedure describes the procedure for coordinating All-Hazards Communications Unit Training in Arizona. It serves as a guide for offering consistent and timely delivery of Training Courses to qualified individuals statewide. The procedure defines who appropriate instructors for this training are, how Arizona will develop a group of OEC approved Arizona based instructors and how individuals or agencies request Communications Unit Training.

Arizona Regional All-Hazards COML Recognition Procedure

The Arizona Regional All-Hazards COML Recognition Procedure describes the procedure for being recognized as an Arizona Regional Communication Unit Leader (COML). It is intended for those individuals who meet the recommended DHS all-hazards COML guidelines for eligibility, training and experience, and are requesting recognition as Arizona Regional Communication Unit Leaders.

SCMP / RICPs

A Strategic Communications Migration Plan (SCMP), formerly known as Regional Interoperable Communications Plan (RICP), establishes the governance and authority for interoperable communications procedures within a Region. The plan identifies current and future requirements and documents the region's interoperable communications priorities. The goal of a SCMP is to:

- Establish a regional vision for interoperable communications
- Develop recommendations to improve regional communications capabilities through key strategic initiatives (and multi-year plans for advancing such initiatives)

- Develop a migration plan for moving from the "as is" state to the desired "to be" condition and develop recommendations from various groups of local stakeholders regarding ways to steadily improve their regional communication capabilities

Several counties in Arizona have or are developing SCMPs.

TICPs

Many SOPs are adopted as part of a TICP. The processes required to develop TICPs (e.g., multi-jurisdictional meetings, data collection, validation exercises, etc.) foster regional networking opportunities and bring communications personnel together in a way that garners more perspectives and inputs.

The Phoenix Urban Area and Tucson Urban Area are designated by the DHS as UASI regions within Arizona. The Phoenix UASI area encompasses all of Maricopa County, which is also the entire Central Region RAC. The Phoenix UASI area developed its first TICP in response to the 2006 DHS TICP initiative. That plan was tested via a TICP Validation Exercise (TVE) in 2006. Communications assets identified in the Phoenix TICP were included in the State Technology Assessment section of the original SCIP. Working with a technical assistance offering from the Department of Homeland Security (DHS) Office of Emergency Communications Technical Assistance Program (ICTAP) the Phoenix UASI TICP was updated and evolved into the Arizona Central Region TICP in 2012 to more accurately represent the constituents.

The Tucson UASI area includes the entire Pima County Region. Tucson was designated a UASI region in January 2007, and completed its TICP in August 2009.

Several other counties in Arizona have or are developing TICPs as well.

Arizona Field Operations Guide

The Arizona Field Operations Guide[34] is a comprehensive field manual for the fire service. The guide includes sixteen chapters with three appendices. Commanders' Responsibilities, Mutual Aid Requests and Deliveries, Urban Search and Rescue, and Safety and Accountability are among the many fire-related programs and procedures explained in detail. Additionally, the document covers several related NIMS/ICS sections such as Command, Logistics, Operations, Planning and Finance. It defines tower/repeater locations and operational details as well as use of national- and state-designated tactical and calling channels. In addition, it includes maps identifying the channels to be used based on user location.

Arizona Fire Service Mutual Aid Plan

The Arizona Fire Chiefs Association (AFCA), through cooperation with the Arizona Department of Fire, Building and Life Safety (ADFBLS), Arizona Division of Emergency Management (ADEM), Arizona State Forestry Division (ASFD), the Arizona Fire District Association (AFDA), and the Professional Fire Fighters of Arizona (PFFA), developed the Fire Service Mutual Aid Plan[35] to provide immediate response resources for all-hazard emergencies. The Fire Service

[34] http://www.azchiefs.org/default.asp?pageid=15&deptid=1
[35] http://www.azchiefs.org/default.asp?pageid=15&deptid=1

Mutual Aid Plan is the initial activation and mobilization plan prior to a declaration of emergency. This plan is also intended to complement the State of Arizona Emergency Response and Recovery Plan (SERRP).

Local Communications Center SOPs

Independent Communications Centers, which are dispatch centers for the various regional communications systems, have dedicated policies and SOPs giving guidance to employees and center users. These guides contain procedures for all aspects of the center's operations including answering phones, paging for emergency and non-emergency calls, equipment operation including interoperability gateways and electronic patching, and selecting repeater locations for coverage control. In addition to specific equipment procedures, the documents contain protocols for dispute resolution, archiving and historical recall, and employee-related rules, such as ethical conduct. SOPs of this nature are reviewed regularly with employees and users and are enforced by the Communications Center Supervisors, Directors and Field Coordinators.

Arizona SIEC VHF Minimum Equipment Standards

The SIEC has adopted nationally recognized feature sets for VHF equipment that promote interoperability. This one-page standards document details minimum channel capacity, channel display, frequency range, narrowband capability and P-25 capability.

Arizona SIEC UHF Minimum Equipment Standards

The SIEC has adopted nationally recognized feature sets for UHF equipment that promote interoperability. This one-page standards document details minimum channel capacity, channel display, frequency range, narrowband capability and P-25 capability.

4.3 Technology

Arizona is currently pursuing a system-of-systems approach to interoperability within the state. This approach encourages interconnection of the various existing operability and interoperability assets to one another in order to provide communications between public safety professionals. The connection of State systems to regional systems and regional systems to one another is recognized as an effective and cost justified solution for long term interoperability.

In the urban areas of Arizona, most of the public safety agencies have either transitioned or are planning to transition to 700/800 MHz, Project 25 (P25) digital trunked radio systems. Many rural areas throughout Arizona operate on separate stand-alone VHF conventional communications systems. This limits their ability to communicate with agencies on other frequency bands such as the Department of Public Safety (DPS) which operates primarily on an UHF conventional communications system.

Prior conceptual design studies have called for a P25 trunked radio system to provide operability and interoperability for state and local agencies statewide, utilizing a high-level network interface to enable interoperability with other (non P25) systems. The cost of this solution was estimated in 2008 at $217 million (not including separate funding needed to

upgrade the State's microwave system from analog to digital technology). The State has not identified funds to enable implementation of the complete system contemplated by this conceptual design.

Existing interoperability assets are categorized as shared systems, shared channels, gateways, and radio caches. Arizona is utilizing CASM as an interoperable communications technology inventory. Arizona currently utilizes a statewide CASM view and is partnering with localities to expand the population of this tool on a statewide basis.

4.3.1 Shared Systems

"Shared system" refers to a single radio system used to provide service to multiple public safety and service agencies/organizations. Arizona operates on multiple local, regional, and state shared land mobile radio (LMR) systems. The majority of these systems serving the more rural areas of Arizona are conventional VHF or UHF while the larger metropolitan areas have migrated, or are in the process of migrating, to 800 MHz trunked systems. State agency systems operate mostly in the UHF and VHF radio bands, with some in 700/800 MHz.

It is important to note that, per FCC requirements, all radios, including portables, mobiles, and base stations, operating below 513 Mhz must be narrowbanded by 2013. In Arizona, many radios are currently in use statewide that will need to be replaced in order to meet narrowbanding requirements. As such, agencies are encouraged to purchase radio equipment which meets the standards established by the SIEC regarding interoperability.

State Agency Systems

Table 4.1 lists the major State Agency Systems in use (or planned) in Arizona.

Table 4.1: Major State Agency Systems

State System Name	Description	Status
DPS Microwave Backbone Infrastructure	Analog technology; moving to digital; southern loop completed	Existing and being enhanced
AIRS	VHF, UHF, 800 MHz conventional narrowband	Existing and being extended
700 MHz System for state agencies (with possible usage by others)	P25 700 MHz digital trunked	Development continues, subject to funding
Arizona Game & Fish, Arizona State Land and Arizona State Parks, and Arizona Departments of Corrections, Agriculture and Juvenile Corrections	VHF conventional	Existing
Department of Public Safety	UHF conventional	Existing
Department of Transportation	VHF conventional, 800 MHz trunked	Existing
DEMA Radio Network (DRN)	VHF conventional	Existing
Emergency Medical Service Communications (EMSCOM), Veterans Memorial Coliseum, Shared Government Operations	UHF conventional	Existing

DPS Microwave Backbone Infrastructure

Arizona's microwave network is owned, operated, engineered, and maintained by DPS and provides microwave connectivity for public safety and service agencies and organizations throughout Arizona. Designed primarily to support State agency radio systems, the network utilizes high mountain-top sites across both metro and rural Arizona to provide radio coverage throughout much of the state. As this analog microwave backbone system grew over the past half-century, a multitude of local agencies, state, county and federal users and functions have come to rely on the DPS statewide sites and/or microwave network for their communications needs. A number of these agencies are listed in Appendix F.

The microwave network interconnects radio sites located across Arizona with dispatch centers and other facilities. It is used mostly to control radio base stations at remote communications sites and can also be used to carry computer data and telephone signals.

Since the mid 1990s, most new communications systems being installed for private microwave users have been all digital technology. Since 2000, all remaining manufacturers have discontinued support for their older analog products, leaving Arizona at the mercy of the used spare parts market. As such, Arizona is facing the very real possibility of a failure that could cause a major disruption of its public safety radio, telephone, and data communications systems, which would be catastrophic to many of its users today, seriously jeopardizing the public safety and homeland security of the state.

In order to support proposed technical initiatives (see Section 5.8) and infrastructure requirements in Arizona, the DPS microwave backbone is being upgraded from an analog network to a digital network, subject to funding availability. This upgrade, being completed by the DPS/WSB, is critical to statewide communications interoperability in Arizona.

Local and/or Regional Shared Systems

Table 4.2 lists the major local and/or regional shared systems in Arizona and includes those used for operable as well as interoperable communications and wireless data networks. Further information on the larger shared systems utilized in major metropolitan areas (i.e., the RWC, TRWC, PCWIN, and YRCS) is provided in Appendix H.

Table 4.2: Arizona Local and/or Regional Shared Systems

Regional System Name	Description	Status
Regional Wireless Cooperative (RWC) – City of Phoenix (Administrative Manager). See Appendix H.2.	700 & 800 MHz P25, simulcast trunked	Existing
TOPAZ Regional Wireless Cooperative (TRWC) – The City of Mesa (Administrative Manager). See Appendix H.3.	700 & 800 MHz P25, simulcast trunked	Existing
Pima County Wireless Integrated Network (PCWIN). See Appendix H.1.	800 MHz P25, simulcast trunked	In development; Expected completion 2013
Yuma Regional Communications System (YRCS). See Appendix H.6.	800 MHz, P25 trunked	Existing and being enhanced
Central Arizona Project	800 MHz trunked	Existing
Salt River Project	VHF conventional,	Existing

Regional System Name	Description	Status
	UHF conventional, 900 MHz trunked	
Arizona Public Service	800 MHz trunked	Existing
Northern Arizona University and City of Flagstaff	800 MHz trunked	Existing
Phoenix Fire Regional Dispatch	VHF conventional	Existing
Maricopa County System	800 MHz Smartzone hybrid digital / analog system, separate VHF conventional	Existing
Prescott Regional Communications	VHF conventional	Existing
Sedona Fire Regional	VHF conventional	Existing

The frequency band used in all of the radio systems serving entities in Arizona are shown in Appendix F. That appendix also shows statewide spectrum usage by Arizona's public safety and service agencies/organizations.

4.3.2 Shared Channels

Inter-system "shared channels" refer to common frequencies/talk groups established and programmed into radios to provide interoperable communications among agencies using different radio systems. In this context, "channel" refers to the name of a common frequency/talkgroup visually displayed on a user's radio.

AIRS and National Interoperable Shared Channels

AIRS is a suite of full-time, cross-banded mutual aid channels designed to provide interoperable communications capability to public safety and service agencies / organizations, as well as other personnel of federal, state, local, tribal agencies and approved NGOs performing public safety/service activities. This system operates on designated interoperability frequencies in the VHF, UHF and 800 MHz bands. Agencies wishing to operate on AIRS must sign a MOU with DPS, which holds the licenses for AIRS frequencies.

These radio frequencies are to be used in the event of a multi-agency operation requiring the use of the common or shared radio channels, specifically for the purpose of coordinating activities during incidents. AIRS frequencies are not designed to be used by a single agency for routine public safety operations. Many public safety and service agencies/organizations in Arizona report having AIRS channels programmed in their radios.

This system provides a basic statewide interoperability asset and establishes a talk path for emergency operations in any covered area of Arizona. Arizona's short-term strategy includes expansion of AIRS coverage in order to provide a basic level of interoperability through national- and state-designated interoperability channels. Specific information regarding these channels is available through the AIRS SOP[36]. Additionally, the Arizona Interoperable

[36] http://www.azpsic.gov/library/airs/default.htm

Channels Plan[37] identifies a subset of national interoperable channels to complement the AIRS system resulting in a set of 16 interoperable channels for each band (VHF, UHF, 700 & 800 MHz) for use during public safety incidents.

4.3.3 Gateways

"Gateway" systems interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles that are able to create patches are also identified as gateways. Gateways and console patches are currently being inventoried through the CASM Data Population Project.

A successful partnership has evolved between YRCS, DPS and the Department of Transportation (ADOT). As a result of this partnership, 700/800 MHz P25 capable radios used by DPS joint operation task forces, ADOT and other properly equipped state agency personnel can interoperate between each other and with some local agencies.

This partnership advances state agency operability in support of regional interoperability and builds on existing investments:

- Digital microwave upgrade in Southern Arizona
- 700 MHz P25 build-out through use of the YRCS master site controller and system.

Utilizing the YRCS Master Site Controller and the DPS upgraded digital microwave system; Conventional Channel Gateways (CCGWs) allow patching of conventional channels with trunked talkgroups and enable interoperable communications across the UHF, VHF and 700/800 MHz radio spectrum bands.

A project underway among YRCS, DPS and the PSIC Office - Racketeer Influenced and Corrupt Organizations (RICO) Project for Radio Communications Interoperability - expanded on this partnership using $2.2M funded through the RICO Act.

Standards-based public safety communications equipment was deployed in 2011 at five key transmitter sites along Arizona's southern border. One site installation remains. The six transmitter sites are located in Cochise, Santa Cruz and Pima counties. The project delivers wide coverage - increasing 700 MHz digital coverage in the Southwest border region by approximately 6500 square miles. The project will increase the ability of public safety professionals to communicate during multi-agency/multi-jurisdictional incidents in the region.

The project has been approved by the Joint Legislative Budget Committee (JLBC), Information Technology Authorization Committee (ITAC) and PSCC. The project has also been endorsed by the AZDOHS, ADOT, and the RAC for the Southern Region as well as public safety officials from local AZ border communities.

The programming of talk groups and installation of control stations at ten PSAPs in the region and to the State Emergency Operations Center (EOC) will help tie local agencies to the State

[37] http://www.azpsic.gov/library/standards/default.htm

for interoperability purposes. A hardware/software system upgrade was also completed to support future expansion of the system.

4.3.4 Radio Caches

Cache radios refer to maintaining a cache of standby radios that can be deployed to support regional incidents. These radios may be from a regional cache, or from a participating agency. These radios allow all responders to use common, compatible equipment during an incident. Some agencies that have large caches of radios include the Maricopa County Sheriff's Office, the City of Glendale, the Phoenix Fire Department and the Pima County Department of Emergency Management.

Public safety and service agencies/organizations statewide have radio caches of various sizes and on various systems or frequency bands, but the content, programming, and capabilities of these caches are determined by the owning agency and are not standardized in any way statewide.

4.3.5 Strategic Technology Reserve

Arizona officials are considering continuity of government as their prime directive for the STR, with augmentation of the current reserves that are deployed throughout Arizona. There are five mobile communications units (MCUs) placed in strategic locations around Arizona to ensure the shortest response times. An MCU (also known as a Mobile Communications Center (MCC), Mobile Communications Vehicle (MCV), or Mobile EOC) refers to a vehicular asset that can be deployed to provide or supplement communications capabilities in an incident area. These MCUs are equipped with a variety of equipment such as subscriber and base station radios of various frequency bands, gateway devices, satellite phones, wireless computer networks, video broadcasting/receiving equipment, etc. Typically these communications devices are permanently stored in the MCUs or accompanying trailers when not in use.

When deployed, the vehicles are staffed by NIMS qualified communications personnel. From the time a call is placed to the time the asset is deployed on location is generally within three hours. For further information on the STR, see Strategic Initiative 5.8.3.4.

4.4 Training and Exercise

There are two types of training and exercise plans in Arizona. The first type of training occurs at the local jurisdictional and discipline level, covering job basics, roles, and responsibilities.

The second type of training and exercise program is conducted on a statewide level. Arizona's statewide training programs create training opportunities for federal, state, local, and tribal entities. For example, these programs offer public safety and service agencies/organizations classes that are multi-disciplinary and/or multi-jurisdictional, and that are designed to include federal, state, local, and tribal entities[38]. These programs are conducted in accordance with FEMA approved training and exercise methodologies. ADEM has an outreach program for

[38] http://www.dem.azdema.gov/preparedness/trainingcalendar/webcal.html

training[39] and exercises[40], and offers FEMA Emergency Management Institute (EMI) programs, which include:

1. ICS
2. NIMS
3. Professional Development Series
4. Advanced Professional Series

4.4.1 General Exercise Programs

Local, regional, and state entities across Arizona conduct public safety exercises to assess the effectiveness of training programs, demonstrate required job skills, practice coordinating with response partners, and test equipment, processes, and/or procedures.

In recent years, Arizona public safety and service agencies/organizations have participated in noteworthy exercise opportunities which emphasized interoperable communications. For example:

1. **June 2009**: The Yuma Region conducted an interoperable communications-focused Tabletop Exercise designed to identify and inform policies, procedures, plans, available assets, and capability gaps of communications systems used by regional agencies in response to a multi-jurisdictional event.
2. **September 2011**: The Arizona Vital Connection 2011 Mobile Communications Interoperability Exercise and Exposition was a full-scale communications exercise designed to establish a learning environment for players to exercise emergency communications response plans, equipment, policies, and procedures. More than 50 local, county, state, Tribal, federal, NGO and vendor agencies participated in the exercise, which was sponsored by the U.S. Northern Command (USNORTHCOM) in conjunction with the Arizona Department of Emergency and Military Affairs (DEMA).
3. **November 2011**: The 2011 Arizona Statewide Vigilant Guard exercise, sponsored by DEMA and led by ADEM, was a full-scale, statewide operations-based exercise designed to ensure effective disaster preparedness and coordinated emergency response among local, county, state, federal, NGO and private sector partners. It was the largest exercise of its kind in the U.S.: Approximately 250 agencies and 8,000 participants (e.g., planners, players, controllers, evaluators, etc.) were involved, including National Guard forces (from Arizona, California, Colorado, Utah, Nevada and Minnesota), and U.S. Northern Command.

4.4.2 Communications Training Offerings

Specific to interoperable communications, Arizona is actively engaged in providing All-Hazards Communications Unit Leader (COML) and Communications Unit Technician (COMT) training course opportunities for public safety professionals statewide to ensure that the State has

[39] http://www.dem.azdema.gov/preparedness/training/training.html
[40] http://www.dem.azdema.gov/preparedness/exercise/exercise.html

trained personnel capable of providing communications technical assistance to on-scene emergency response professionals during a multi-jurisdictional response [41].

The PSIC Office has developed an Arizona Communications Unit Training Coordination Procedure that will serve as a guide for offering consistent and timely delivery of future COML, COMT and Communications Unit Train-the-Trainer (TtT) courses. The Procedure incorporated input from the NIMS-CU Workgroup and ADEM, as well as information from the OEC draft COML Best Practices Guide, and lays the ground work for establishing a group of OEC approved Arizona-based Instructors for Communications Unit courses. The Coordination Procedure was approved by the SIEC on March 2011[42].

COML Training

The All-Hazards COML course provides DHS approved NIMS compliant instruction to train emergency responders to serve as Communications Unit Leaders during emergency operations. All-Hazards COML training will qualify emergency responders to lead ICS communications units provided they possess the necessary prerequisites, including knowledge of: local communications, communications systems, and regional, state, and local communications plans.

All-Hazards COML responsibilities include developing plans for the effective use of incident communications equipment and facilities, managing the distribution of communications equipment to incident personnel, and coordinating the installation and testing of communications equipment. Students must meet a series of prerequisites and, upon completion of formal classroom training, must complete and obtain sign-off on a comprehensive position-specific All-Hazards COML Task Book before they can be certified by their agency as an All-Hazards COML.

To date, twelve All-Hazards COML courses have been conducted statewide, providing training to over 180 students, and one COML TtT course was offered to qualified individuals in 2010. The value of the information disseminated through this type of training is recognized, and additional course offerings are being planned.

COMT Training

The All-Hazards COMT course provides DHS approved NIMS compliant instruction to train emergency responders by enhancing skills needed to successfully establish and operate technical communications resources and perform communications-related duties in support of the COML, as well as Command and General Staff, in an all-hazards emergency environment.

The training includes instruction on how to utilize standardized operational and technical procedures common to COMTs working within the ICS organizational structure during all hazards emergency operations. Students must meet a series of prerequisites which are similar to those of the COML course and, upon completion of formal classroom training, must complete and obtain sign-off on a comprehensive position-specific All-Hazards COMT Taskbook before they can be certified by their agency as an All-Hazards COMT.

[41] http://www.azpsic.gov/library/coml
[42] http://www.azpsic.gov/meetings/minutes.htm

To date, two All-Hazards COMT courses have been conducted in Arizona. Further course offerings will be organized, subject to funding availability.

4.4.3 State Credentialing of Communications Personnel

A Recognition Program for All-Hazards COMLs was developed by the SIEC Communications Unit Workgroup, staffed by PSIC, in 2010. On August 17, 2010 SIEC formed the NIMS Communications Unit (NIMS-CU) Workgroup and approved its Policies and Procedures.[43] This standing Workgroup is responsible for reviewing the qualifications of applicants seeking Arizona Regional recognition or renewal of recognition for All-Hazards positions within the ICS Communications Unit and awards recognition to qualified applicants.

The PSIC Office has posted several resources and information about All-Hazards COML training and recognition in AZ on the COML web page[44], including:

- Policies, procedures and associated forms for the Recognition Program and National Incident Management System Communications Unit (NIMS-CU) Workgroup
- Arizona Regional All-Hazards COML Resource List
- Arizona All-Hazards COML Taskbook
- Frequently Asked Questions related to the All-Hazards COML Taskbook and the Arizona Regional All-Hazards COML Recognition Program
- Sample All-Hazards COML Taskbook

For further information on this on-going process, see Strategic Initiative 5.8.4.1.

4.4.4 AIRS Training Curriculum

The statewide AIRS training program[45] is designed to promote AIRS by informing agencies about AIRS existence and capabilities, and ensure effective use of AIRS as a statewide interoperable communications asset. Arizona's PSIC Office developed the AIRS training program with a grant from Federal Department of Homeland Security. AIRS training is endorsed by AZDOHS, DPS and the PSCC.

Upon completion of the AIRS training program, participants will be able to:

- Identify when AIRS is to be used.
- Demonstrate how to select the right channel.
- Demonstrate understanding of plain English requirement.
- Demonstrate understanding of requirement to use agency affiliation and title.
- Demonstrate knowledge of system's known limitations.
- Demonstrate knowledge of the regional monitoring and dispatching capabilities.
- Identify who to notify in their agency if there is a problem with AIRS.

[43] http://www.azpsic.gov/library/coml/NIMS-CU_Policies_and_Procedures.pdf
[44] http://www.azpsic.gov/library/coml
[45] http://www.azpsic.gov/library/airs/

4.5 Usage and Outreach

Public safety and service professionals become more proficient and more accurate with their communications equipment as they use that equipment more frequently. Arizona increasingly utilizes training, exercises, and outreach to use interoperability equipment, whenever possible. Outreach efforts bring interoperability information to Arizona's public safety community, elected officials, and other stakeholders (such as private and non-profit partners).

4.5.1 Events

Arizona hosts numerous local, statewide, national, and international sporting, civic, and fundraising planned events. As was the case with Arizona's successful hosting of Super Bowl XLII in 2008, these events often pose significant communications challenges for the state's public safety and service agencies/organizations.

4.5.1.1 NECP Goals

The National Emergency Communications Plan (NECP) is the Nation's first strategic plan to improve emergency response communications. The vision of the NECP is to ensure emergency response personnel at all levels of government and across all disciplines, can communicate as needed, on demand and as authorized through improvements in communications operability, interoperability and continuity nationwide.

The NECP established three goals to measure interoperability, operability, and continuity of communications as follows:

> Goal 1—By 2010, 90 percent of all high-risk urban areas designated with the Urban Area Security Initiative (UASI) are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
>
> Goal 2—By 2011, 75 percent of non-UASI jurisdictions are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
>
> Goal 3—By 2013, 75 percent of all jurisdictions are able to demonstrate response level emergency communications within three hours, in the event of a significant incident as outlines in national planning scenarios.

Goal One Events

As part of the Goal 1 implementation process, OEC required UASIs to demonstrate response-level emergency communications during a planned event. Additionally, as part of the State's SCIP Implementation Report update in 2010, OEC required states to report information on UASIs' current capabilities. OEC selected the Davis Monthan Air Show (March 20-21, 2010) in Tucson, and the Subway Fresh Fit 500 NASCAR event (April 8-10, 2010) in Phoenix as the events to assess UASI performance in meeting NECP Goal One. OEC determined that both the Phoenix and Tucson UASIs successfully demonstrated response-level emergency communications as outlined by NECP Goal 1.

Goal Two Events

The PSCC approved the "Arizona Approach for Assessing Non-UASI Counties Progress toward Meeting NECP Goal Two Methodology" ("Arizona's Goal Two Methodology") on July 20, 2010. Arizona submitted its measurement methodology to OEC as part of Arizona's 2010 SCIP Implementation Report on November 22, 2010.

The PSCC approved "Arizona's NECP Goal Two Performance Assessment Guide" ("Performance Assessment Guide") on November 16, 2010 to help Counties prepare for their Goal Two Performance Assessments. The Performance Assessment Guide supplements Arizona's Goal Two Methodology and was developed based on experience with the NECP Goal One Assessments, which were judged on the same criteria.

PSIC worked with Arizona's 13 non-UASI counties in 2011 to assess their ability to demonstrate response-level emergency communications during a routine event. Events were to be managed in accordance with National Incident Management System (NIMS) and included large public gatherings that required participation from multiple public safety agencies and jurisdictions. Observed events included participation from 116 State and local public safety agencies and Non-Governmental Organizations (NGOs), 12 Tribal agencies and six Federal agencies. Additional information regarding Arizona's NECP Goal Two assessments can be found in the *Arizona Compendium of Findings and Recommendations from National Emergency Communications Plan (NECP) Goal 2 Observations*[46] and the *Statewide Summary of Arizona's NECP Goal Two Results*[47].

4.5.2 Local Interoperability Usage

The use of interoperable communications within Arizona is routine and handled at a jurisdictional level rather than as an over-arching statewide process. For example, areas utilizing shared radio systems possess the ability to interoperate across agencies or disciplines on a daily basis. Additionally, interoperable communications are routinely used in support of planned events (e.g., large scale sporting events, civic festivals, etc.).

AIRS

AIRS is more often used for localized emergency incidents than regional interoperability at this time. DPS does not keep records showing the individual agency use of AIRS, because there is no way to accurately measure AIRS usage in its present configuration. As designed and constructed, the network does not require intervention by an operations center and there is no managing software to measure and report on usage. Individual agencies and counties, however, report using AIRS to various extents, with some regions using AIRS regularly and some areas using AIRS infrequently or virtually not at all (largely dependent on the availability of other interoperability assets in the region).

[46] http://www.azpsic.gov/library/necp/AZ_NECP_Goal_2_Compendium_02142012.pdf
[47] http://www.azpsic.gov/library/necp/Arizona_NECP_Goal_Two_Results_02142012.pdf

4.5.3 Testing

Testing of interoperable solutions is not presently conducted on a standardized basis; rather, equipment is tested through ad hoc procedures and at locally convenient times (e.g., during roll-call, drills, exercises, etc.).

4.5.4 Education and Outreach

The concept of interoperability is promoted through an Outreach Program which focuses on stakeholder engagement and interaction, including open public meetings, a user-friendly website, and regular communications to interested parties. The intent of the Outreach Program is to encourage and coordinate collaborative efforts, and to identify and help address local, regional and state barriers to advancing interoperability solutions and usage.

PSIC Office Outreach

PSCC, SIEC and the PSIC Office must have effective two way dialogue with stakeholders in Arizona to advance interoperability. Therefore, the goal of stakeholder engagement and interaction activities is bi-directional communication with all first responder agencies to:

- Enable PSCC, SIEC and the PSIC Office to understand the needs, desires, limitations and advances in interoperable communications statewide, and
- Identify mechanisms by which important interoperable communication information can be shared with all stakeholders.

Stakeholder engagement and interaction objectives are documented in the PSIC Office Plan[48] and include efforts to:

- Engage stakeholders throughout Arizona in efforts to advance interoperable communications, including bringing stakeholders together for mutual benefit
- Share information with stakeholders to support their efforts to make advances in interoperable communications
- Identify unmet needs statewide and begin to identify existing and future resources that could be used to address those needs
- Support stakeholders and expand knowledge by participating in training and exercise opportunities

In support of the objectives noted above, the PSIC Office proactively employs many stakeholder engagement and interaction strategies documented in this annually updated plan.

Statewide Education and Outreach Plan

The PSIC Office, in conjunction with OEC, held a statewide stakeholder session as part of its April 13, 2010 Statewide SCIP Implementation Workshop to begin drafting a Statewide Education and Outreach Plan. The session was designed to identify key local stakeholders and priorities for outreach and education efforts, and the information gathered was used as a basis

[48] http://www.azpsic.gov/initiatives/default.htm

for generating a plan to encourage participation and give direction to stakeholders for supporting education and outreach activities.

The Statewide Education and Outreach Plan[49] regarding Public Safety Communications Interoperability, developed by the PSIC Office, provides information and resources to emergency response policy makers and practitioners about interoperable communications initiatives and directives that impact the State. It is intended for all Arizona stakeholders to use as a resource for their outreach efforts and includes the following:

- **Goals**: Goals supported by the Plan that will strengthen interoperable communication efforts across the State.
- **Fundamental Messages:** Significant messages about the benefits of achieving interoperable communications which are relevant to any subject that may be referenced during education and outreach activities.
- **Suggested Outreach Tactics:** Methods that can be employed by stakeholders to effectively convey communications interoperability messages.
- **Stakeholder Roles:** Responsibilities of Outreach Target Audiences at all levels of government.
- **Targeted Interoperability Topics**: Specific outreach topics which were determined to be of high priority in the Plan year. Each topic lists Background and Supporting Materials.
- **Next Steps:** Stakeholder responsibilities for continued efforts in support of interoperable communications education and outreach.

It is the aim of the Statewide Education and Outreach Plan that stakeholders in all areas of public safety will combine efforts, leverage their expertise, share success stories and work in partnership to move the State forward in achieving communications interoperability. Annual reviews of the Plan will be conducted by PSIC and updates will be made as necessary. Further information on the Statewide Education and Outreach Plan can be found in Strategic Initiative 5.8.5.1

[49] http://www.azpsic.gov/initiatives/default.htm

5.0 STRATEGY

This SCIP establishes a plan, including strategic initiatives and supporting milestones, for identifying, developing, and overseeing governance requirements, SOPs, training, technical solutions, and short- and long-term funding sources.

5.1 Problem Definition

Arizona public safety and service agencies/organizations face interoperability challenges that are compounded by the difficult geography, topography, and population distribution across Arizona. Public safety and service professionals require the ability to communicate with one another when needed across disciplines, agencies, or jurisdictional boundaries. Recent advancements in statewide interoperability have elevated public safety communications in Arizona but all regions are not able to take advantage of these advancements or fully enjoy interoperable communications appropriate to their communities. This connectivity gap can be correlated with service delays, hindered responses, and operational challenges which could potentially impact the life and/or safety of citizens and public safety professionals alike. For these reasons, statewide interoperability gaps remain a significant priority for Arizona.

5.2 Interoperability Solution

Arizona is pursuing a system-of-systems approach to interoperable communications that leverages connections between separate local, regional, and/or state operated LMR systems. Specific development, support, and implementation components to this approach are documented in detail in the following sections.

5.2.1 Vision

Arizona is pursuing a vision for statewide interoperability that will enable public safety and service agencies/organizations to have access to quality interoperable communication systems, to be adequately trained, and to utilize such systems effectively in multi-disciplinary, multi-jurisdictional incident response.

5.2.2 Mission

The mission for this SCIP is to advance public safety communications interoperability statewide. Elements and strategies presented in this SCIP support this ongoing mission.

5.3 Goals and Objectives

The goals for achieving Arizona's interoperability vision are represented by the strategic initiatives detailed in Section 5.8 below. Table 5.1 summarizes these initiatives to further Arizona's interoperability goals. Annual progress toward achieving these initiatives is reported to OEC via the SCIP Implementation Report (see Appendix G).

Table 5.1: Arizona SCIP Initiatives

#	Section #	Strategic Initiative	Governance	SOPs	Technology	Training & Exercise	Usage & Outreach
1	5.8.1.1	**Expand and Implement Interoperable Voice and Data Communications Governance Model and Plan**	X				
2	5.8.1.2	**Develop Regional Communications Governance Structures**	X				
3	5.8.1.3	**Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Interoperable Communications**	X				
4	5.8.2.1	**Establish a Policies, Standards, and Procedures (PSP) Framework, and Implement PSPs, Including SOPs, for Statewide Interoperable Communications Solutions**		X			
5	5.8.3.1	**Enhance and Promote the AIRS Interoperable Communications Solution**			X		
6	5.8.3.2	**Implement, Enhance and Promote Functional Regional Voice and Data Systems in Support of Interoperable Communications**			X		
7	5.8.3.3	**Upgrade the Statewide Microwave Backbone Infrastructure to Digital Technology**			X		
8	5.8.3.4	**Sustain the State STR**			X		
9	5.8.3.5	**Upgrade Operable Voice and Data Communication Systems for State Agencies in Support of Interoperable Communications**			X		
10	5.8.4.1	**Develop and Implement a Training Plan to Address Interoperable Communications**				X	
11	5.8.4.2	**Develop and Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications**				X	
12	5.8.5.1	**Create and Implement an Education and Outreach Plan in Support of Interoperable Communications**					X

5.4 Scope and Timeframe

This SCIP provides a strategic approach to achieving interoperability for Arizona's public safety and service agencies/organizations. The strategic initiatives detailed in Section 5.8 span a timeframe from one to eight calendar years (2012 – 2020), depending on the initiative, and provide for short- and long-term solutions. The SCIP is not intended to address tactical operations or provide tactical response plans for public safety and service agencies/organizations. In addition, this SCIP does not constitute an emergency operations, response, or recovery plan.

5.5 Funding

As with many states, Arizona is facing enormous budgetary challenges leading to uncertain long-term funding, as well as current restrictions on procurement and hiring. The lack of funding available for major infrastructure projects identified in the SCIP has hampered Arizona's ability to implement projects as planned, and has resulted in delays or modifications to project plans. In cases where funding is available, there has been a lack of resources available to adequately implement SCIP objectives due to reductions in agency personnel. In addition, while funding has been available for certain projects, new procurement requirements implemented due to the budget challenges have delayed project implementation.

State & Local Funding Sources

- PSIC Office Appropriations
- ADEM Appropriations
- DPS Appropriations
- RICO Funding
- State Agency Users Appropriations
- Local Government Appropriations

5.5.1 Grants Management

Arizona relies on a significant amount of grant funding and technical assistance to implement interoperable communications projects. Specifically, Arizona works with the following funding and technical assistance sources:

Federal Funding Sources

- State Homeland Security Grant Program (SHSGP)
- Interoperable Emergency Communications Grant Program (IECGP)
- Public Safety Interoperable Communications Grant Program (PSIC)
- Border Interoperability Demonstration Project (BIDP)
- Operation Stone Garden (OPSG)
- Urban Area Security Initiative (UASI)

- Interoperable Communications Technical Assistance Program (ICTAP)
- Metropolitan Medical Response System (MMRS)
- Emergency Operations Center Grant Program (EOC)
- Emergency Management Performance Grants (EMPG)
- State and Local Implementation Grant Program (SLIGP)

Requests to utilize grant funding for interoperable voice and data communications are reviewed by the SWIC in cooperation with the SAA to ensure that the funding requests align with the SCIP.

5.6 National Incident Management System (NIMS) Compliance

Arizona embraces the national effort to standardize incident command. By Executive Order 2007-23[50], ADEM is charged with incorporating NIMS into existing statewide training programs and exercises, seeking federal preparedness funding sufficient to support NIMS implementation, incorporating NIMS into emergency operations plans, promoting intrastate mutual aid agreements, providing and coordinating technical assistance to local entities regarding NIMS to ensure statewide compliance, institutionalizing the use of NIMS and leading the effort to achieve statewide NIMS compliance to endeavor to ensure continued eligibility for federal homeland security grant funds (see Appendix D).

The PSCC will ensure that all future revisions and updates to the SCIP realize NIMS compliance in their structure and application.

5.7 National Emergency Communications Plan (NECP) Alignment

The NECP is the Nation's first strategic plan to improve emergency response communications. The Office of Emergency Communications at DHS developed the NECP in cooperation with federal departments and agencies, state, local, and tribal governments, emergency response providers and the private sector. The NECP can be found at www.safecomprogram.gov. The vision of the NECP is to ensure emergency response personnel at all levels of government and across all disciplines, can communicate as needed, on demand and as authorized through improvements in communications operability, interoperability and continuity nationwide.

The NECP sets forth three key goals for improved interoperability, operability, and continuity of communications as follows:

> Goal 1 – By 2010, 90 percent of all high risk urban areas designated within the Urban Area Security Initiative (UASI) are able to demonstrate response level emergency communications within one hour for routine events involving multiple jurisdictions and agencies

[50] http://azmemory.lib.az.us/cdm4/item_viewer.php?CISOROOT=/execorders&CISOPTR=631&CISOBOX=1&REC=12

Goal 2 – By 2011, 75 percent of non-UASI jurisdictions are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies

Goal 3 – By 2013, 75 percent of all jurisdictions are able to demonstrate response-level emergency communications within three hours, in the event of a significant incident as outlined in national planning scenarios.

Emergency Communications is defined by the NECP as the ability of emergency responders to exchange information via data, voice and video, as authorized to complete their missions. Response level emergency communications is defined by the NECP as the capacity of individuals with primary operational leadership responsibility to manage resources and make timely decisions during an incident involving multiple agencies, without technical or procedural communication impediments.

The NECP includes specific objectives, initiatives and milestones which must be met in order to address deficiencies in the Nation's emergency communications posture. Arizona is committed to meeting these objectives, initiatives, and milestones identified in the NECP and will implement a strategy for supporting national level goals applicable to regional, state, local, and tribal interoperable communications through Strategic Initiative 5.8.1.3. When applicable, the SCIP strategic initiatives detailed in Section 5.8 below identify the specific NECP objectives, initiatives and milestones that pertain to that initiative.

5.8 Strategic Initiatives

The Strategic Initiatives identified in this section of the SCIP were categorized along the lanes of the DHS Interoperability Continuum (Governance, SOPs, Technology, Training and Exercises, and Usage), and further reflect the following definitions.

Initiative Operational Definitions

Initiative projected completion timeline is defined as follows:

- **Short-term:** those initiatives projected for completion within three years from the acceptance of the SCIP
- **Medium-term:** those initiatives projected for completion between three and five years from the acceptance of the SCIP
- **Long-term:** those initiatives projected for completion between six and ten years from the acceptance of the SCIP

Initiative priority is defined as follows:

- **High:** Establishes a framework to enable interoperability for public safety and service agencies/organizations; or can be accomplished through identified and available resources
- **Medium:** Builds on established foundations to enhance interoperability; or requires resources which are not immediately available

- **Low:** Develops redundant interoperable capabilities, or requires a longer term to complete

Initiative primary participants are those agencies that have responsibility for ensuring that the objectives, action plan and performance measures for each initiative are achieved. All stakeholders are expected and encouraged to participate in the implementation of each initiative. Identified primary participants include:

- DPS
- Local, Tribal, and State agencies
- PSIC Office
- Regional partners: A single agency, or a group of agencies, with public safety / public service responsibilities involved in the planning, development or operations of an operable communications system capable of interoperable communications, and representing a geographic region in Arizona. These regions may be Homeland Security Regions (RACs), UASIs, counties, metropolitan areas, reservations or other functional regions.
- State Agency Users: Agencies of the State of Arizona that require a public safety radio communications system, and/or can benefit from and contribute to communications interoperability.

Support for these initiatives are provided by:

- Federal Agencies
- PSCC
- SIEC
- AZDOHS
- Stakeholders Statewide

5.8.1 Governance

5.8.1.1 Expand & Implement Interoperable Voice and Data Communications Governance Model & Plan

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.1	2
1	1.1	5
1	1.3	2

Gap Statement: Governance of interoperable communications is a key component of achieving interoperability and Arizona stakeholders must work continually to evolve the governance model and plans to advance interoperability for Arizona.

Initiative Description: This initiative is designed to expand and strengthen the statewide Arizona governance model and its fundamental system components (e.g., the PSCC, SIEC, PSIC Office, SWIC, State Agency Group, workgroups, stakeholder resource pool, etc.) as an essential precursor to achieving other key strategic interoperability objectives. Furthermore, this initiative supports maintaining the SCIP as a current reflection of the statewide efforts toward communications interoperability.

Priority: High

Term/Timeframe: Short-term (2012); on-going (SCIP maintenance)

Lead/Owner: PSIC Office

Primary Participants:

- PSCC
- SIEC
- Regional partners

Action Plan:

1) Governance Model
    a. Conduct statewide stakeholder input meetings around governance issues, as needed
    b. Request technical assistance to conduct governance model assessments and execute technical assistance offerings, as awarded
2) SCIP
    a. Identify funding source to support annual SCIP review efforts
    b. Engage in a review of the SCIP annually, or more often as necessary
    c. As needed, procure contractual support to execute annual SCIP revisions
    d. Submit revised SCIP drafts to PSIC Office for review
    e. Submit reviewed drafts to PSCC, SIEC and statewide stakeholder review
    f. Submit final SCIP draft to PSCC for approval

g. Distribute and/or make available (via the PSIC Office website) a revised SCIP to appropriate stakeholders

3) SIEC
   a. Form workgroups as needed to advance SCIP initiatives
   b. Constitute workgroup membership to provide broad statewide representation
   c. Incorporate workgroup teleconferences to accelerate work flow
4) Connecting State Governance to Regional and Local Governance
   a. Provide outreach and education to build solid working relationships and to encourage frank, productive discussions between state and regional/local governance groups regarding communications issues

Objectives:

1) Conduct an annual review and update the SCIP, as needed
2) Continue to develop the relationship between and among statewide governance entities and evolving regional and local governance entities

Performance Measures:

1) Conform to updated governance approach
2) Finalize and publish an approved reviewed and/or revised SCIP annually
3) Ensure consistent alignment of the SCIP to the NECP
4) Effective usage of SIEC workgroups

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Award of technical assistance or grants
3) Updates to SCIP, NECP, or other federal requirements
4) Participation of regional and local stakeholders statewide

Funding:

- Federal
  - IECGP
  - SHSGP
- State
  - PSIC Office

Potential funding

- Federal
  - SLIGP

Outreach Plan: See Sections 4.5.4 and 5.8.5.1

5.8.1.2 Develop Regional Communications Governance Structures

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.3	2

Gap Statement: While Arizona has taken steps to expand and improve governance structures at the state level, regional governance structures are needed and remain a work in progress. Specifically, Arizona recognizes these remaining gaps relative to regional governance structures statewide:

Arizona regions, counties, and/or localities need to develop and/or enhance existing governance structures to provide regionalized coordination and cooperation in pursuit of communications interoperability enhancements.

Initiative Description: Support localities within the State of Arizona as they form regionalized governance structures designed to improve coordination, collaboration, and resource sharing efforts related to communications interoperability.

Priority: Medium

Term/Timeframe: Medium-term (2013)

Lead/Owner: Regional Partners

Primary Participants:

- PSIC Office

Action Plan:

1) Governance Model(s)
    a. Conduct stakeholder input meetings around regional governance issues, as needed.
    b. Request technical assistance to conduct governance model assessments and execute technical assistance offerings, as awarded
    c. Engage in tactical communications planning at the regional level
2) Strategic Communications Migration Plan (SCMP)
    a. Request technical assistance or grants to develop SCMPs, as requested
    b. Execute offerings, as awarded
3) TICP
    a. Request technical assistance or grants to develop TICPs
    b. Execute offerings, as awarded
4) CASM
    a. Utilize NECP Goal 2 assessments to capture regional asset inventory information.
    b. Enter captured asset inventory information into CASM.

Objectives:

1) Develop TICPs and expand the utilization of CASM
2) Support tactical and strategic communications planning among federal, state, local, and tribal governments at the regional interstate level (NECP milestone)

Performance Measures:

1) Develop and codify regional governance structures and associated guidance documents
2) Develop SCMPs for counties and/or defined regions
3) Develop or finalize and publish TICPs for counties and/or defined regions
4) Populate CASM data as provided by counties

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Cooperation of stakeholders statewide
3) Award of Technical Assistance or grants
4) Ongoing federal sustainment of the CASM tool

Funding:

Potential funding

- Federal
  - IECGP
  - OEC
  - SHSGP
  - UASI
- Local
  - Local Government Appropriations

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.1, 1.3	1.1.2, 1.1.5, 1.3.2
3	3.1, 3.2	3.1.6, 3.1.7, 3.2.1
7	7.2	7.2.4, 7.2.5

Gap Statement: Arizona is committed to meeting the regional, state, local, and tribal level objectives, initiatives, and milestones identified in the NECP. Additionally, these stakeholder groups are also assessed against additional national guidance from FEMA, the FCC, and other entities. Areas within Arizona vary as to their level of achievement regarding these guidelines.

Initiative Description: This initiative is intended to support developing mechanisms to enhance the ability of stakeholders to achieve applicable objectives, initiatives, and milestones identified in the NECP. This initiative is also intended to support developing mechanisms to achieve FCC narrowbanding mandates, evolving national broadband standards, and additional guidelines from agencies including FEMA and OEC.

Priority: Medium

Term/Timeframe: Long-term

Lead/Owner: PSIC Office

Primary Participants:

- Regional partners
- State Agency Users
- PSCC
- SIEC

Action Plan:

1) Problem/Needs Analysis
    c. Define the problems facing Arizona related to achieving national guidance compliance
    d. Identify possible solutions
2) Stakeholder Input
    a. Define a scope for each subordinate approach/solution.
    b. Provide needs statements and inputs
    c. Identify required participants
3) Planning
    a. NECP
        i. Support efforts and actions based on the improvement plans derived from NECP Goal 1 assessment efforts
        ii. Execute assessment plans for NECP Goal 2
        iii. Develop assessment plans for NECP Goal 3

iv. Develop project plans to address remaining NECP objectives, initiatives, and milestones

b. Narrowbanding
   i. Support efforts to achieve narrowbanding mandates by 2013

c. Broadband
   i. Review guidance information as it becomes available
   ii. Share guidance information with stakeholders statewide
   iii. Develop plans to achieve compliance with recommended broadband standards, as they become available

4) Design - Research historical lessons learned/successes (e.g., from SMEs, other localities/states, etc.)
5) Develop Proposals
   a. Submit for stakeholder/SME review/feedback/recommendations
   b. Present revised proposals to the appropriate approval body(ies) for further review and approval
6) Implement approved approaches
7) Conduct both on-going and end result evaluations

Objectives:

1) Promote compliance with state, local, and tribal objectives and milestones as listed in the NECP
2) Support assessment/demonstration of NECP goals at the state, local, and tribal level
3) Support implementation of FEMA and OEC initiatives
4) Promote compliance with evolving national public safety broadband standards and structures
5) Support narrowbanding in compliance with FCC mandates

Performance Measures:

1) Complete NECP Goal 2 assessment reports of all counties
2) Submit full capabilities and response level communications reports to OEC for NECP Goal 2
3) Develop an assessment methodology for NECP Goal 3 based on federal guidance
4) Achieve narrowbanding compliance on a local or regional level
5) Develop a broadband strategy for Arizona based on national standards and structures

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Cooperation of stakeholders statewide
3) Availability of guidance from national agencies/organizations

Funding:

- Federal
  - SHSGP

Potential funding

- Federal
  - IECGP
  - OEC
  - SLIGP
  - UASI
- State
  - PSIC Office

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.2 SOPs

5.8.2.1 Establish a Policies, Standards, & Procedures (PSP) Framework, & Implement PSPs, Including SOPs, for Statewide Interoperable Communications Solutions

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.3	2
3	3.1	7
3	3.2	1

Gap Statement: Arizona does not have a statewide PSP framework regarding interoperable communications. Furthermore, although some statewide interoperable communications solutions exist and others are being planned, Arizona has not developed or implemented consistent SOPs regarding the use of those solutions and has not developed templates to ensure that future SOPs are developed in a consistent manner.

Initiative Description: In order to fully coordinate interoperable communications statewide, Arizona needs to establish a reliable PSP framework that allows stakeholders to implement interoperability projects consistently across the state. This initiative promotes the development of that framework & its component SOPs and enables stakeholders to implement those SOPs.

Priority: High

Term/Timeframe: Short-term (2012)

Lead/Owner: PSIC Office

Primary Participants:

- Regional partners
- State Agency Users
- SIEC

Action Plan:

1) Problem/Needs Analysis
   a. Identify the deficiencies statewide impacting the establishment of a PSP framework and associated SOPs in support of interoperable communications
   b. Identify possible solutions
2) Stakeholder Input
   a. Define a scope for each subordinate approach/solution
   b. Provide needs statements and inputs
3) Planning
   a. Develop a PSP framework for statewide interoperability
   b. Develop SOP and other templates to promote procedural consistency within AZ
   c. Develop needed SOPs
4) Design - Research historical lessons learned/successes (e.g., from SMEs, other localities/states, etc.)

5) Develop Proposals
    a. Submit for stakeholder/SME review/feedback/recommendations
    b. Present revised proposals to the appropriate approval body(ies) for further review and approval
6) Implement approved approaches
7) Conduct both ongoing and end result evaluations

Objectives:

1) Develop a statewide interoperable communications PSP Framework
2) Develop consistent interoperable communications SOPs and SOP templates
3) Implement developed SOPs statewide
4) Implement technical solutions to comply with established statewide PSPs
5) Develop a statewide public safety broadband integration/implementation strategy and related standards
6) Promote the use of plain language and decrease dependence on the use of coded substitutions (NECP milestone)

Performance Measures:

1) Finalize and publish a PSP Framework for interoperability within Arizona
2) Finalize and publish approved interoperable communications SOP templates
3) Finalize and publish approved SOPs related to statewide interoperable communications solutions (e.g., shared channels, STR assets, etc.)
4) Finalize and publish approved broadband integration/implementation strategy

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Cooperation of stakeholders statewide
3) Award of technical assistance or grants
4) Availability of national broadband guidance

Funding:

- State
    - PSIC Office

Potential Funding

- Federal
    - SHSGP
    - SLIGP

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.3 Technology

5.8.3.1 Enhance and Promote the AIRS Interoperable Communications Solution

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
3	3.1	6

Gap Statement: AIRS radio frequencies are designed to be used in the event of a multi-agency operation requiring the use of common state radio channel(s), specifically for the purpose of coordinating activities during identified incidents. Additional AIRS installations and enhancements are required to provide statewide coverage and access to this solution.

Initiative Description: Arizona's short-term strategy includes sustaining AIRS coverage in order to provide a basic level of interoperability through national and state interoperability channels. AIRS supports VHF, UHF, and 800 MHz frequencies used throughout Arizona, with a cross-band repeater configuration that allows communication between bands.

Priority: Medium

Term/Timeframe: Short-term (2012)

Lead/Owner: Regional Partners / SIEC

Primary Participants:

- DPS
- Local agencies
- PSIC Office
- SIEC

Action Plan:

1) Coverage
   a. Identify coverage and/or usage gaps
   b. Identify additional appropriate locations for AIRS assets (e.g., suite/tower locations, etc.), as needed.
   c. Configure, test and deploy appropriate AIRS assets
   d. Ensure deployed assets are operational
2) Planning
   a. Garner SIEC workgroup support
   b. Develop a draft AIRS Improvement and Sustainability plan
   c. Submit to stakeholders for review and input
   d. Submit to PSCC and SIEC for review and approval
   e. Deliver final plan to associated stakeholders

Objectives:

1) Provide enhanced AIRS coverage in areas requiring additional support
2) Develop and implement an AIRS Improvement and Sustainability Plan

Performance Measures:

1) Deploy additional AIRS suites as needed to achieve desired coverage, as resources allow
2) Document an AIRS Improvement and Sustainability plan

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Access to suite locations and assets
3) Identification of long-term maintenance and sustainability resources
4) Cooperation of local agencies and users

Funding:

Potential funding

- Federal
  - SHSGP
- State
  - DPS – While there is no dedicated funding, DPS has assumed responsibility for funding the maintenance and operations of AIRS equipment
- Local – Certain AIRS recipient agencies are responsible for funding the facilities to host AIRS suites

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.3.2 Implement, Enhance and Promote Functional Regional Voice and Data Systems in Support of Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
3	3.1	6

Gap Statement: Although some robust regional systems exist (see Appendix H) and other systems are under development, many areas within Arizona do not have access to regional shared systems and currently operate on individual agency systems. Lack of or inadequate connectivity between systems hinders interoperability.

Initiative Description: Arizona has identified the linking of regional systems with one another and with state systems as the means to facilitate interoperability statewide. This initiative is designed to support the development of those component systems and related connections.

Priority: High

Term/Timeframe: Long-term

Lead/Owner: Regional Partners

Primary Participants:

- PSIC Office
- State Agency Users
- PSCC
- SIEC

Action Plan:

1) Problem/Needs Analysis
   a. Define the problems facing Arizona related to developing robust and sustainable regional systems that serve as foundational elements for statewide interoperable communications
   b. Identify possible solutions
2) Stakeholder Input
   a. Define a scope for each subordinate approach/solution
   b. Provide needs statements and inputs
3) Planning
   a. Develop funding plans for projected regional system projects/needs statewide
   b. Develop sustainment plans which incorporate outreach, leadership support, and education elements in addition to funding requirements.
4) Design - Research historical lessons learned/successes (e.g., from SMEs, other localities/states, etc.)
5) Develop Proposals
   a. Submit for stakeholder/SME review/feedback/recommendations
   b. Present revised proposals to the appropriate approval body(ies) for further review and approval

6) Implement approved approaches
7) Conduct both on-going and end result evaluations

Objectives:

1) Encourage partnerships in regional shared systems
2) Support the development of new regional shared systems
3) Provide enhancements to existing regional shared systems
4) Develop interoperability connections between regional shared systems
5) Develop regional strategic technology assets and other communications redundancies
6) Program national interoperability channels into emergency responder radios (NECP milestone)

Performance Measures:

1) Participate in and/or facilitate meetings to foster regionalization of public safety/service communications
2) Pursue grant funding and technical assistance to promote developing new and enhancing existing regional shared systems
3) Provide outreach and education to encourage productive discussion regarding the benefits and challenges of regionalized communications strategies
4) Implement interoperable communications between users of neighboring shared systems (e.g., intersystem shared channels, etc.)
5) Implement redundant and/or ancillary communications capabilities at the regional level
6) Program national interoperability channels into radios

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Impact of “Home Rule” decision making and local autonomy
3) Cooperation of local agencies and users
4) Willingness of agencies to consider a regionalized approach that consolidates communications services
5) Fostering the support of appropriate elected and governmental officials
6) Impact of National Environmental Policy Act (NEPA) assessments and approvals
7) Challenges related to the technical interoperability between proprietary systems
8) Award of technical assistance or grants

Funding:

- Federal
  - SHSGP
  - IECGP
  - PSIC
  - OEC
- State
  - PSIC Office - Supports regional planning through technical assistance, outreach efforts and consulting to regional partners
- Local

Potential funding

- Federal
  - OPSG
  - UASI
  - SLIGP

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.3.3 Upgrade the Statewide Microwave Backbone Infrastructure to Digital Technology

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
None	None	None

Gap Statement: The current statewide microwave network is owned, operated, engineered, and maintained by DPS and provides microwave connectivity for local, state, and federal public safety and/or service agencies throughout Arizona. Although built primarily to support State agency radio systems, many other agencies use some portion of its capacity.

In order for the statewide microwave network to continue to provide the infrastructure needed to support its mission, an upgrade of the microwave backbone to digital technology is required. A digital backbone must be in place for Arizona to implement a modern, standards-based, interoperable public safety radio communications system for the state. The southern loop has been successfully upgraded but the balance of the Microwave Network still needs to be upgraded.

Initiative Description: This initiative is designed to support the move from the current analog microwave system to a digital microwave system.

Priority: High

Term/Timeframe: Long-term (2017)

Lead/Owner: DPS/WSB

Primary Participants:

- Local agencies
- Tribal agencies
- State Agency Users

Action Plan:

1) Identify connectivity gaps
2) Identify alternate routing and site options
3) Complete necessary site/tower modifications
4) Acquire necessary microwave infrastructure
5) Configure microwave infrastructure for deployment
6) Test associated microwave equipment prior to deployment
7) Deploy equipment to designated location(s)
8) Ensure completed loop connectivity

Objectives:

1) Complete the Microwave Southern Loop Connectivity (2010 –Complete)
2) Complete the Microwave Southwestern Loop Connectivity (subject to funding availability)
3) Complete the Microwave Northwestern Loop Connectivity (subject to funding availability)
4) Complete the Microwave Northern Loop Connectivity (subject to funding availability)

Performance Measures:

1) Complete Southern Loop digital capability and redundancy (Complete)
2) Complete Southwestern Loop digital capability and redundancy
3) Complete Northwestern Loop digital capability and redundancy
4) Complete Northern Loop digital capability and redundancy

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Access to and integrity of physical infrastructure elements to support the microwave equipment
3) Identification and procurement of new infrastructure sites
4) Spectrum availability and licensing
5) NEPA assessments and approvals
6) Identification of long-term maintenance and sustainability resources
7) Cooperation of federal, state, local, and tribal agencies

Funding:

- Federal
  - SHSGP
  - PSIC
- State
  - DPS
- Local

Potential funding

- Federal
  - UASI

Outreach Plan: Utilize existing and develop new statewide partnerships to enable microwave upgrades. Update the PSCC and SIEC on initiative progress. Provide required updates to PSIC, the AZDOHS, and the Joint Legislative Budget Committee (JLBC). Periodically update regional partner groups on microwave upgrade progress.

5.8.3.4 Sustain the State Strategic Technology Reserve (STR)

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
7	7.2	5

Gap Statement: Key state officials need a reliable redundant communications system among and between themselves and the agencies relying on them for decisions in times of emergency. Arizona officials consider the COG as the prime directive for the STR, with augmentation of the current reserves that are deployed throughout Arizona. In addition, implementation of the STR is a mandatory requirement for the National Telecommunications and Information Administration (NTIA) PSIC Grant and incorporating the STR into emergency communications plans (ECPs) is a milestone in the NECP.

Initiative Description: This initiative is designed to sustain telecommunications capabilities during emergencies that may involve communication outages affecting existing commercial and non-commercial telecommunication services. This initiative equips MCUs with interoperable communications equipment (e.g., subscriber radios, base stations, gateways, satellite phones, etc.) and information technology equipment (e.g., laptop computers, etc.) that can be deployed to provide or supplement communications capabilities and governmental operations to an incident area. Furthermore, this initiative equips caches in support of COG efforts as needed.

Priority: Medium

Term/Timeframe: Medium-term (2015)

Lead/Owner: ADEM

Primary Participants:

- State Officials
- Capitol Police
- County Emergency Managers

Action Plan:

1) Identify gaps in COG communications
2) Identify possible solutions
3) Develop STR plan
4) Develop the RFP
5) Receive bidder proposals
6) Evaluate proposals against RFP criteria (e.g., price, experience, recurring expenses, timelines, etc.) and award the winning contract(s)
7) Complete and issue the required purchasing orders
8) Configure, program, and deploy received equipment
9) Document deployed equipment in Emergency Communications Plans (ECPs).
10) Complete training on use and maintenance of equipment

Objectives:

1) Pre-position and secure mobile interoperable communications assets for immediate deployment to impacted areas statewide in an emergency or major disaster
2) Provide redundant communications assets which can reconstitute basic public safety/service communications in the event of a catastrophic communication failure
3) Augment COG capabilities by providing a reserve of communications assets to government officials
4) Define alternate/backup capabilities in ECPs (NECP milestone)

Performance Measures:

1) Establishment of multiple communications pathways between key governmental officials and key emergency management officials
2) Deployment of all equipment purchased and dedicated to the STR
3) Demonstrate the ability to mobilize and activate STR equipment to impacted sites within a reasonable time frame
4) Incorporate STR and other redundant communication asset information into ECPs

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Identification of long-term maintenance and sustainability resources
3) Marketing the availability and applicability of STR resources
4) Delays in radio equipment procurement and/or delivery

Funding:

- Federal
  - PSIC
- State
  - ADEM
- Local – STR recipient agencies are responsible for funding training, maintenance and operations of STR equipment

Outreach Plan: Actively engage emergency planning and communications groups statewide through briefings on the capabilities and limitations of the STR, including access and deployment procedures. Ensure that STR equipment and request procedures are consistently documented in all statewide emergency response plans, COG plans, and TICPs.

5.8.3.5 Upgrade Operable Voice and Data Communication Systems for State Agencies in Support of Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
None	None	None

Gap Statement: Existing public safety LMR communications systems for Arizona State agencies are nearing end-of-life, requiring significant updates and/or replacement in order to maintain connectivity and service for users and compliance with state and federal communications standards (e.g., narrowbanding, etc.) in support of interoperability.

Initiative Description: Develop and implement a plan to provide State agencies with continued access to operable public safety/service LMR communications that includes migrating from existing end-of-life resources to sustainable solutions capable of establishing interoperability among State agencies and with federal, local, and tribal public safety and service agencies/organizations.

Priority: High

Term/Timeframe: Long-term

Lead/Owner: DPS/ WSB

Primary Participants:

- State Agency Users

Action Plan:

1) Form the State Agency Group
2) Problem/Needs Analysis
   a. Define the communications problems facing State Agency Users
   b. Identify possible solutions
3) Stakeholder Input
   a. Define a scope for each subordinate approach/solution
   b. Provide needs statements and inputs
4) Planning
   a. Develop funding plans for needed State agency systems or equipment enhancement
   b. Develop implementation/migration plans for proposed State agency solutions
   c. Develop sustainment plans which incorporate outreach, leadership support, and education elements in addition to funding requirements
5) Design - Research historical lessons learned/successes (e.g., from SMEs, other localities/states, etc.).

6) Develop Proposals
    a. Submit for stakeholder/SME review/feedback/recommendations
    b. Present revised proposals to the appropriate approval body(ies) for further review and approval
7) Implement approved approaches
8) Conduct both on-going and end result evaluations

Objectives:

1) Develop a plan to provide State Agency Users with continued access to operable public safety/service LMR communications in support of statewide interoperability
2) Implement immediate solutions to enhance operable communication systems for State Agency Users in support of interoperable communications
3) Implement upgrades to operable communication systems for State Agency Users in support of interoperable communications

Performance Measures:

1) Develop a plan to provide State Agency Users with continued access to operable public safety/service LMR communications in support of statewide interoperability

Critical Success Factors/Risks:

1) Completion of the statewide digital microwave network
2) Availability of resources (e.g., funding, staffing, equipment, etc.)
3) Spectrum availability and licensing
4) Identification of long-term maintenance and sustainability resources

Funding:

- State
    - DPS
    - ADOT
- Other
    - RICO

Potential funding

- Federal
    - SHSGP
    - UASI
    - OEC
    - SLIGP
- State
    - State Agency Users
    - ADEM

Outreach Plan: Utilize strong existing relationships in the formation of the State Agency Group. Update the PSCC and the SIEC on initiative progress. Provide required updates to PSIC, the AZDOHS, and the JLBC.

5.8.4 Training and Exercise

5.8.4.1 Develop and Implement a Training Plan to Address Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.3	2
3	3.1	7
3	3.2	1
7	7.2	4

Gap Statement: Arizona recognizes a need to coordinate communications-focused training opportunities statewide in order to ensure that appropriate users and stakeholders achieve and maintain mission critical interoperable communications competencies.

Initiative Description: This initiative seeks to develop a statewide interoperable communications training plan for Arizona.

Priority: Medium

Term/Timeframe: Medium-term (2013)

Lead/Owner: PSIC Office

Primary Participants:

- ADEM
- Regional partners
- Local agencies
- State agencies
- Tribal agencies
- Federal agencies
- SIEC

Action Plan:

1) Conduct a statewide communications-focused training and exercise needs analysis
2) Evaluate existing regional training plans
3) Develop a statewide Training and Exercise Plan (T&EP)
    a. Execute regional communications-focused Training and Exercise Plan Workshops (T&EPW) which identify strategies to support funding, staffing, and Corrective Action Plan (CAP) decisions within the regional T&EP
    b. Execute a statewide communications-focused T&EPW which incorporates the regional T&EPs into a statewide T&EP
4) AIRS Training
    a. Deliver AIRS training curriculum and materials to end users statewide

   b. Develop a sustainable AIRS training program in order to perpetuate AIRS training
   c. Incorporate AIRS training into the multi-year T&EP

5) Communications Unit Leader (COML)/Communications Unit Technician (COMT)
   a. Implement the COML Training and Recognition Program
   b. Provide additional COML Train the Trainer opportunities to qualified candidates
   c. Execute functional exercises designed to give COML candidates opportunities to sign off their task books
   d. Develop COMT training and credentialing protocols as federal training opportunities and program guidance are offered

Objectives:

1) Develop regional multi-year communications-focused T&EPs
2) Develop a statewide multi-year communications-focused T&EP
3) Implement AIRS training statewide
4) Implement the COML Training and Recognition Program and develop Arizona based, federally approved COML instructors
5) Implement a COMT Training Program and determine a credentialing protocol

Performance Measures:

1) Regions finalize and publish multi-year communications-focused T&EPs
2) Finalize and publish a statewide multi-year communications-focused T&EP which incorporates existing regional T&EPs into a statewide T&EP
3) Increase the number of COML candidates trained across the State of Arizona
4) Increase the number of qualified COMLs available within Arizona
5) Increase the number of qualified COML Instructors available within Arizona
6) Document an Arizona approach to COMT training, credentialing, and tracking
7) Implement AIRS training statewide

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Cooperation of stakeholders
3) Availability of technical assistance

Funding:

- Federal
  - IECGP
  - OEC
  - SHSGP
- State
  - ADEM
  - PSIC Office

- Local

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.4.2 Develop and Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.3	2
3	3.1	7
3	3.2	1
7	7.2	4

Gap Statement: Although exercise offerings vary at the local level, Arizona has not prioritized incorporating communication capabilities into exercise opportunities statewide and would benefit from conducting additional communications-focused exercises. Arizona does not have a multi-year statewide comprehensive communications T&EP that incorporates interoperable communications needs or capabilities.

Initiative Description: Emphasize incorporating interoperable communications into public safety and service agencies'/organizations' exercise opportunities, developing a multi-year communications focused regional T&EPs, and creating a consolidated statewide T&EP.

Priority: Medium

Term/Timeframe: Medium-term (2013)

Lead/Owner: PSIC Office

Primary Participants:

- Regional partners
- Local agencies
- State agencies
- Tribal agencies
- Federal agencies
- SIEC

Action Plan:

1) Conduct a statewide communications-focused exercise needs analysis
2) Evaluate existing regional exercise plans
3) Develop a statewide T&EP
    a. Execute regional communications-focused T&EPWs which identify strategies to support funding, staffing, and CAP decisions within the regional T&EP
    b. Execute a statewide communications-focused T&EPW which incorporates the regional T&EPs into a statewide T&EP

4) Coordinate exercise offerings with identified communications-focused training needs (e.g., COML task book functional exercises, etc.)
5) Promote incorporating communications capabilities into exercise opportunities statewide
6) Execute communications-focused discussion- and operations-based exercises

Objectives:

1) Develop regional multi-year communications-focused T&EPs
2) Develop a statewide multi-year communications-focused T&EP
3) Conduct exercises focused on or incorporating interoperable communications

Performance Measures:

1) Regions finalize and publish multi-year communications-focused T&EPs
2) Finalize and publish a statewide multi-year communications-focused T&EP which incorporates existing regional T&EPs into a statewide T&EP
3) Incorporate communications capabilities into exercise plans and report on communications capabilities in After Action Reports/Improvement Plans

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, etc.)
2) Local and regional stakeholder interest and/or participation
3) Availability of technical assistance

Funding:

- Federal
  - IECGP
  - OEC
  - SHSGP
- State
  - ADEM
  - PSIC Office
- Local

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

5.8.5 Usage and Outreach

5.8.5.1 Create and Implement an Education and Outreach Plan in Support of Interoperable Communications

NECP Alignment:

NECP Objective	NECP Initiative	NECP Milestone
1	1.3	2

Gap Statement: In a vast state with many remote areas and many critical public safety needs to address, it is difficult for all stakeholders to stay informed regarding critical public safety interoperable communications issues.

Initiative Description: The Education and Outreach Plan will encourage collaboration and educate policy makers and practitioners on:

- Federal and state-level interoperability initiatives, mandates, requirements, and guidelines
- National requirements and timelines
- Best practices throughout Arizona

The plan will also describe the roles, responsibilities, and opportunities for involvement of PSCC, SIEC, regional partners, and all federal, state, local, and tribal agencies/organizations in the implementation of the statewide plan.

Priority: Medium

Term/Timeframe: Short-term (2012)

Lead/Owner: PSIC Office

Primary Participants:

- Regional partners
- State agency users
- PSCC
- SIEC

Action Plan:

1) Develop and implement an Outreach Plan that activates regional, federal, state, local, and tribal stakeholders in support of interoperable communications
   a. Identify strategies for stakeholder involvement
   b. Submit for stakeholder/SME review/feedback/recommendations
   c. Present revised drafts to the appropriate approval body(ies) for further review and approval
2) Implement approved approaches
3) Update the Plan annually
4) Conduct both on-going and end result evaluations

Objectives:

1) Develop and implement a statewide Education and Outreach Plan in support of interoperable communications that describes the plan for encouraging collaboration and educating policy makers and practitioners
2) Provide outreach to all stakeholders regarding NECP requirements and timelines
3) Provide outreach to all stakeholders regarding public safety broadband
4) Provide outreach to all stakeholders regarding FCC narrowbanding requirements and timelines

Performance Measures:

1) Develop partnerships with agency public information officers, communication managers, regional communication centers and emergency managers
2) Implement the statewide Education and Outreach Plan

Critical Success Factors/Risks:

1) Availability of resources (e.g., funding, staffing, equipment, etc.)
2) Cooperation of stakeholders into a statewide discussion process

Funding:

- Federal
  - IECGP
  - OEC
- State
  - PSIC Office

Potential funding

- Federal
  - SLIGP

Outreach Plan: See Sections 4.5.4 and 5.8.5.1.

6.0 CONCLUSION

The Arizona SCIP provides an overview of the State of Arizona, synopsizes its demographic and geographic features, describes Arizona's public safety and service agencies/organizations, documents the current interoperability assets available statewide, notes the presence and application of current operations standards and protocols, and presents the strategic initiatives chosen to further the overall interoperability plan for the future.

NEXT STEPS

The PSIC Office is committed to developing comprehensive action/project plans to accompany each initiative detailed in this SCIP and to facilitate implementing these initiatives. Action/project plans are presented to the PSCC and SIEC for their review and input during open public meetings. Further, the plans are made available via the PSIC Office website[51] and the PSIC Office reports progress on each initiative during PSCC and SIEC meetings, as appropriate. Questions or inquiries regarding the detailed action/project plan for each initiative should be directed to the Arizona SWIC via the PSIC Office.

[51] http://www.azpsic.gov/

Appendix A REGIONAL AND COUNTY INFORMATION

A.1 Cities and Towns within Each County

Arizona Cities and Towns within Each County (November 2007)				
Apache County Alpine Eagar Greer Saint Johns Springerville **Cochise County** Benson Bisbee Bowie Douglas Huachuca City Pearce Sunsites Sierra Vista Tombstone Willcox **Coconino County** Flagstaff Fredonia Page Sedona Tuba City Williams **La Paz County** Bouse Ehrenberg Parker Quartzsite Salome Wenden	**Gila County** Globe Hayden Miami Payson Pine Strawberry Star Valley Winkelman Young **Graham County** Pima Safford Thatcher **Greenlee County** Clifton Duncan Morenci **Maricopa County** Avondale Buckeye Carefree Cave Creek Chandler El Mirage Fountain Hills Gila Bend Gilbert Glendale Goodyear Guadalupe Litchfield Park	**Maricopa County (Continued)** Mesa Paradise Valley Peoria Phoenix Queen Creek Scottsdale Sun City Sun City West Sun Lakes Surprise Tempe Tolleson Tonopah Wickenburg Youngtown **Mohave County** Bullhead City Chloride Colorado City Dolan Springs Kingman Lake Havasu City Oatman **Navajo County** Heber-Overgaard Holbrook Joseph City Lakeside Overgaard Pinetop-Lakeside Show Low Snowflake Taylor Winslow	**Pima County** Ajo Arivaca Catalina Green Valley Marana Oro Valley Sahuarita South Tucson Tucson **Pinal County** Apache Junction Arizona City Casa Grande Coolidge Eloy Florence Kearny Mammoth Maricopa Oracle Picacho Picacho Peak Red Rock San Manuel Superior	**Santa Cruz County** Nogales Patagonia Rio Rico Sonoita Tubac **Yavapai County** Ashfork Bagdad Black Canyon City Camp Verde Chino Valley Clarkdale Cottonwood Dewey-Humboldt Jerome Lake Montezuma Mayer McGuireville Peeples Valley Prescott Prescott Valley Rimrock Sedona (also Coconino Co) Seligman Verde Village Yarnell **Yuma County** San Luis Somerton Wellton Yuma

A.2 UASI Areas

Cities and Towns Included in the Phoenix UASI (November 2007)	
Apache Junction	Paradise Valley
Avondale	Peoria
Buckeye	Phoenix
Carefree	Queen Creek
Cave Creek	Scottsdale
Chandler	Surprise
El Mirage	Tempe
Fountain Hills	Tolleson
Gila Bend	Wickenburg
Gilbert	Youngtown
Glendale	Fort McDowell Indian Community
Goodyear	Gila River Indian Community
Guadalupe	Salt River Pima-Maricopa Indian Community
Litchfield Park	State of Arizona
Mesa	Unincorporated Maricopa County

Cities and Towns Included in the Tucson UASI (November 2007)	
Ajo	Rillito
Arivaca	Sahuarita
Catalina	Santa Rita Foothills
Corona de Tucson	Sasabe
Cortaro	Sells
Green Valley	South Tucson
Lukeville	Topawa
Mount Lemmon	Tucson
Oro Valley	Vail
Mount Lemmon	Why
Pisinemo Trading Post	

A.3 2007 SCIP Process Participating Agencies

2007 SCIP Process Participating Agencies (November 2007)
State Government Department of Emergency Management and Military Affairs Department of Health Service Department of Homeland Security Department of Public Safety Government Information Technology Agency Public Safety Communications Advisory Commission
Local Government City of Case Grande City of Mesa City of Peoria City of Yuma Cochise County EOC Coconino County EOC Coconino County Sheriff's Department Emergency Operations Centers Gila County Sheriff's Department Gila River Indian Community Gilbert Fire Department La Paz County Sheriff's Department Maricopa County EOC Maricopa County Sheriff's Department Mesa Fire Department Mohave County Phoenix Fire Phoenix Police Department Pima County Pima County Sheriff's Department Pinal County Pinal County La Paz County EOC Town of Gilbert Tucson Police Department Yavapai County Sheriff's Department
Private Companies Federal Engineering Motorola Northrop Grumman Science Applications International Corporation (SAIC) Tyco Electronics

Appendix B TRIBAL NATION POC INFORMATION[52]

Ak-Chin Indian Community 42507 W Peters & Nall Road Maricopa, AZ 85239 http://www.ak-chin.nsn.us/	Navajo Nation PO Drawer 9000 Window Rock, AZ 86515 http://www.navajo-nsn.gov/
Cocopah Indian Tribe Avenue G & County 15th Somerton, AZ 85350 http://www.cocopah.com/	Pascua Yaqui Tribe 7474 S Camino DeOeste Tucson, AZ 85746 http://www.pascuayaqui-nsn.gov/
Colorado River Indian Tribes 26600 Mohave Rd Parker, AZ 85344 http://crit-nsn.gov/	Pueblo of Zuni Tribe 1203B State Hwy 53 PO Box 339 Zuni, NM 87327 http://www.ashiwi.org
Fort McDowell Yavapai Nation PO Box 17779 Fountain Hills, AZ 85269 http://www.ftmcdowell.org/	Salt River Pima-Maricopa Indian Community 10005 E Osborn Rd Scottsdale, AZ 85256 http://www.srpmic-nsn.gov/
Fort Mojave Indian Tribe 500 Merriman Ave Needles, CA 92363 http://www.fortmojave.com/	San Carlos Apache Tribe PO Box 0 San Carlos, AZ 85550 http://www.sancarlosapache.com/
Fort Yuma-Quechan Tribe PO Box 1899 Yuma, AZ 85366	San Juan Southern Paiute Tribe PO Box 1989 Tuba City, AZ 86045
Gila River Indian Community PO Box 97 Sacaton, AZ 85147 http://www.gilariver.org	Tohono O'odham Nation: PO Box 837 Sells, AZ 85634 http://www.tonation-nsn.gov/
Havasupai Tribe PO Box 10 Supai, AZ 86435 http://www.havasupaitribe.com/	Tonto Apache Tribe #30 Tonto Apache Reservation Payson, AZ 85541
Hopi Tribe PO Box 123 Kykotsmovi, AZ 86309 http://www.hopi-nsn.gov/	White Mountain Apache Tribe PO Box 700 Whiteriver, AZ 85941 http://www.wmat.nsn.us/
Hualapai Tribe PO Box 179 Peach Springs, AZ 86434 http://www.hualapai-nsn.gov/	Yavapai-Apache Nation 2400 W Dubai Camp Verde, AZ 86322 http://www.yavapai-apache.org/
Kaibab-Paiute Tribe Tribal Affairs Building HC 65, Box 2 Fredonia, AZ 86022 http://www.kaibabpaiute-nsn.gov/	Yavapai-Prescott Indian Tribe 530 E Merritt Street Prescott, AZ 86301

[52] February 2011. http://indianaffairs.sta.az.us/

Arizona Lands of Federally Recognized Tribes

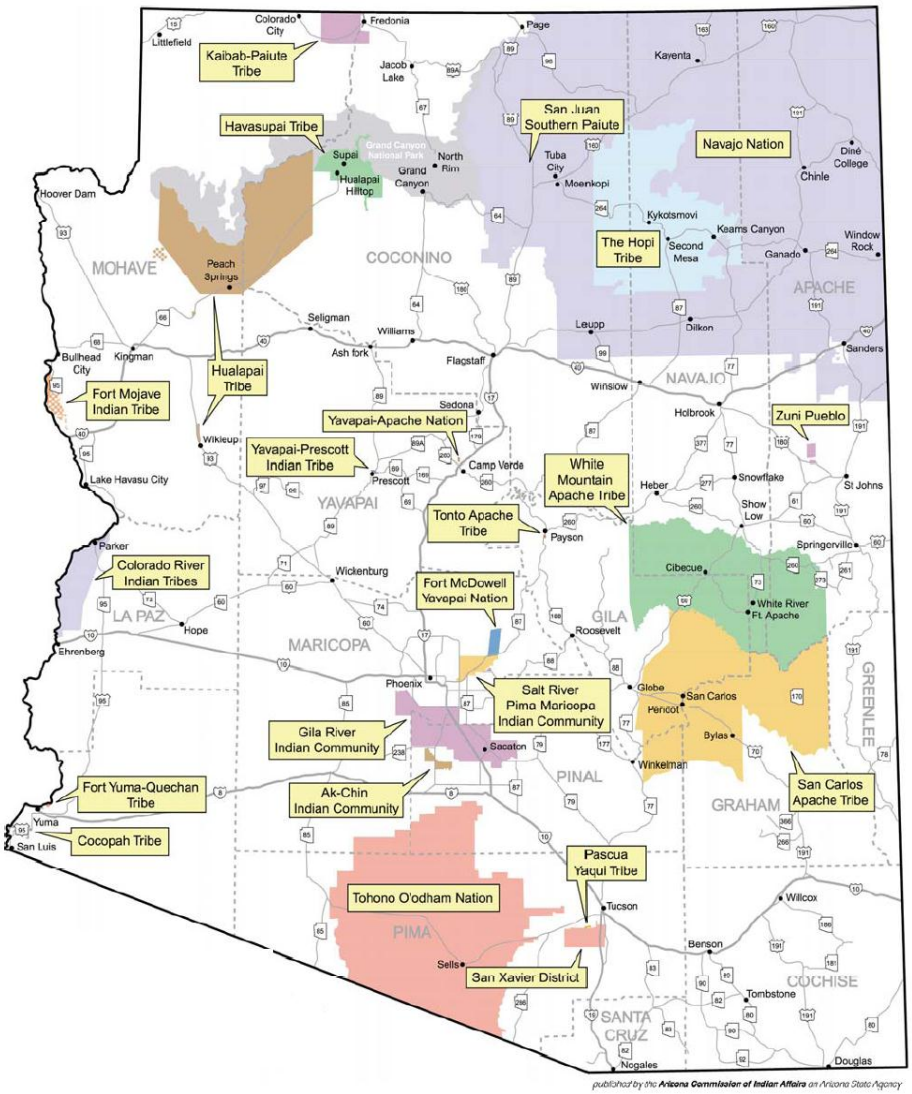


Figure B - 1: Lands of Federally Recognized Tribes[53]

[53]Arizona Commission of Tribes; http://www.indianaffairs.state.az.us/

Appendix C UASI POC Information

The Phoenix UASI

Primary and Alternate Points of Contact (POCs) for Communications are:

Phoenix UASI Primary Communications POC:

Name: Jesse W. Cooper
Title: Communications/IT Manager, Phoenix Police Department
Address: 100 E. Elwood Street, Phoenix, Arizona, 85040-1071
Office: (602) 534-0315
Mobile: (602) 768-4314
E-mail: jesse.cooper@phoenix.gov

Phoenix UASI Alternate Communications POC:

Name: Michael G. Worrell
Title: Captain, Phoenix Fire Department
Address: 150 S. 12th Street, Phoenix, Arizona, 85034
Mobile: (602) 370-5232
E-mail: mike.g.worrell@phoenix.gov

The Tucson UASI

Primary and Alternate Points of Contact (POCs) are:

Tucson UASI Primary POC is:

Name: Wes J. Dison
Title: Commander, Tucson Police Department
Address: 1100 S. Alvernon Way, Tucson, AZ 85711
Office: (520) 837-7379
E-mail: wes.dison@tucsonaz.gov

Tucson UASI Alternate POC:

Name: David Azuelo
Title: Commander, Tucson Police Department
City of Tucson, Office of Emergency Management & Homeland Security
Address: 1100 S. Alvernon Way, Tucson, AZ 85711
Mobile: (520) 837-7378
E-mail: david.azuelo@tucsonaz.gov

Appendix D EXECUTIVE ORDER 2007-23

EXECUTIVE ORDER 2007-23

Designation of the National Incident Management System (NIMS) as the Basis for all Incident Management in Arizona (Amending Executive Order 2005-08)

WHEREAS, in Homeland Security Presidential Directive, the President of the United States directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System (NIMS), which would provide a consistent nationwide approach for Federal, State, local, and tribal governments to work together more effectively and efficiently to prevent, prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity; and

WHEREAS, it is necessary and desirable that all Federal, State, local, and tribal emergency agencies and personnel coordinate their efforts to effectively and efficiently provide the highest levels of incident management; and

WHEREAS, to facilitate the desired levels of incident management it is critical that Federal, State, local, and tribal organizations use standardized terminology, standardized organizational structures, interoperable communications, consolidated action plans, unified command structures, uniform personnel qualification standards, uniform standards for planning, training, and exercising, comprehensive resource management, and designated incident facilities during emergencies or disasters; and

WHEREAS, the NIMS standardized procedures for managing personnel, communications, facilities and resources will improve the State's opportunities for federal funding to enhance local and state agency readiness, maintain first responder safety, and streamline incident management processes; and

WHEREAS, federal guidelines for homeland security grant funding for federal fiscal year 2006 and beyond require NIMS compliance as a condition of eligibility; and

WHEREAS, the National Commission on Terrorist Attacks (9-11 Commission) recommended adoption of a standardized Incident Command System;

NOW, THEREFORE, I, Janet Napolitano, Governor of the State of Arizona, by virtue of the authority vested in me by the Constitution and laws of this State, hereby order and direct as follows:

1. The National Incident Management System (NIMS) will be the State standard for incident management.

2. The Arizona Division of Emergency Management (ADEM) will lead NIMS implementation throughout Arizona.

3. ADEM shall be charged with:

Executive Order 2007-23
Page Two

a. Incorporate NIMS into existing statewide training programs and exercises;
b. Seeking federal preparedness funding sufficient to support NIMS implementation;
c. Incorporating NIMS into emergency operations plans;
d. Promoting intrastate mutual aid agreements;
e. Providing and coordinating technical assistance to local entities regarding NIMS to ensure statewide compliance;
f. Institutionalizing the use of the NIMS; and
g. Leading the effort to achieve statewide NIMS compliance to ensure continued eligibility for federal homeland security grant funds.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

GOVERNOR

DONE in Phoenix, Arizona this 24th of September Two Thousand Seven and of the Independence of the United States the Two Hundred and Thirty-Second.

ATTEST:

SECRETARY OF STATE

Appendix E PSCC AND SIEC MEMBERSHIP

PSCC Commissioners[54]

Name	Title	Agency
Aaron V. Sandeen	Deputy Director & State CIO	Arizona Department of Administration – Arizona Strategic Enterprise Technology (ADOA-ASET)
Thomas Alinen	Deputy Chief of Police	Sierra Vista Police Department
Joe Anderson	Retired	
Michael Brashier	Communications Manager	City of Casa Grande
William David Bunce	Fire Chief	Salt River Pima Maricopa Indian Community
Steven Campbell	Chief	City of El Mirage Police Department
Douglas Chappell	Fire Chief	Drexel Fire
Patrick Hancock	Chief	Snowflake Fire
Jan Hauk	Past President	Arizona Fire District Association
Gilbert Orrantia	Director	Arizona Department of Homeland Security
William Pribil	Sheriff	Coconino County
Jeffrey Raynor	Lt. Colonel	Department of Public Safety
Bryan Savage	Fire Chief	Lakeside Fire Department
Dewayne Woodie	Fire Chief	Ganado Fire District/EMS
Mike Worrell	Captain	Phoenix Fire Department

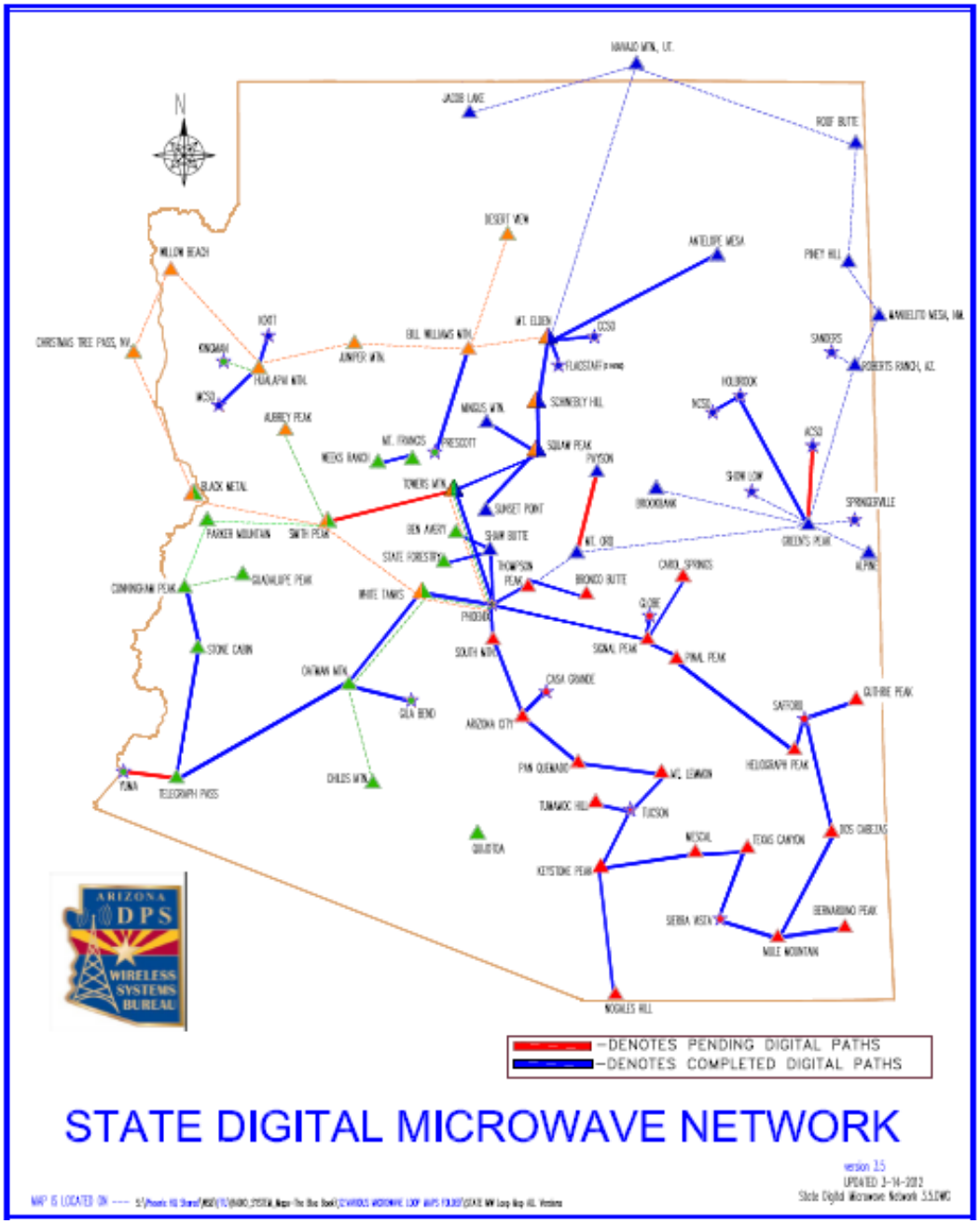
SIEC Members[55]

Name	Title	Agency
Mark Venuti (Co-Chair)	Director	Guardian Medical Transport
Paul Wilson (Co-Chair)	Captain	Pima County Sheriff's Department
Scott Tillman	Wireless Systems Engineer	AZ Department of Public Safety
Pete Weaver	Director	Maricopa County Department of Emergency Management (MCDEM)
Jesse Cooper	Communications/IT Manager	Phoenix Police Department

[54] Current as of July 2012. Please visit http://www.azpsic.gov for the current list of Commissioners.
[55] Current as of July 2012. Please visit http://www.azpsic.gov for the current list of Committee Members.

Appendix F TECHNOLOGY ASSETS

Microwave Map[56]



[56] Arizona Department of Public Safety, Wireless Systems Bureau; http://www.azdps.gov/About/Organization/Technical_Services/

AIRS Suite Tower Locations

AIRS Channel	Monitoring Agency	County Serviced	Suite Location(s)
AIRS1	Maricopa County	Maricopa	Towers Mountain Thompson Peak South Mountain White Tanks Mountain
AIRS2	Pima County	Pima	Mt. Lemmon Keystone Peak
AIRS2	Santa Cruz County	Santa Cruz	Nogales Hill
AIRS2	Coconino County	Coconino	Navajo Mountain Mt. Elden Bill Williams Mountain Schnebly Hill Jacob Lake (pending) Juniper Mountain (pending) Brookbank (pending)
AIRS3	Pinal County/Casa Grande PD	Gila Pinal	Signal Peak Mt. Ord
AIRS3	La Paz County	La Paz	Cunningham Peak (pending) Black Metal
AIRS3	Yuma County	Yuma	Telegraph Pass Oatman Mountain (not monitored)
AIRS3	Havasupai Tribe	Coconino	Long Mesa
AIRS4	Navajo County	Navajo Apache	Piney Hill Roberts Ranch Greens Peak Antelope Mesa Holbrook Brookbank Point
AIRS4	Mohave County	Mohave	Willow Beach Christmas Tree Pass Hualapai Mountain Black Rock (pending) Black Metal
AIRS5	Pima County	Pima	Childs Mountain
AIRS5	DPS Tucson	Greenlee Graham Cochise	Heliograph Pass Mule Mountain Bernardino Peak Guthrie Peak
AIRS5	Sedona	Yavapai	Black Canyon Juniper Mountain Mingus Mountain Squaw Peak

State Agency Radio Frequency Bands[57]

STATE AGENCY RADIO FREQUENCY BANDS					
Agency	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Department of Transportation	X			X	
Department of Public Safety		X			
Game & Fish Department	X				
Department of Corrections	X				
Department. of Juvenile Corrections	X				
Parks Board & State Land Department	X				
Department of Agriculture	X				
EMSCOM		X			
Veterans Memorial Coliseum		X			
Shared Government Operations		X			
AIRS	X	X	X		

County Sheriff Radio Frequency Bands[58]

COUNTY SHERIFF RADIO FREQUENCY BANDS					
County	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Apache County	X				
Cochise County	X				
Coconino County	X				
Gila County	X				
Graham County	X				
Greenlee County	X				
La Paz County	X				
Maricopa County					**700/800**
Mohave County	X				
Navajo County	X				
Pima County				X	
Pinal County	X				
Santa Cruz County	X				
Yavapai County	X				
Yuma County					X

[57] Frequency Band information compiled from Southwest Frequency Directory, Arizona Region, 10th Edition: 2009.
[58] Frequency Band information compiled from Southwest Frequency Directory, Arizona Region, 10th Edition: 2009.

City Agency Radio Frequency Bands[59]

CITY AGENCY RADIO FREQUENCY BANDS					
City (By County)	VHF	UHF	800	800	800
	CONV	*CONV*	*CONV*	*TRUNK*	*P-25*
APACHE					
Eagar	X				
Springerville	X				
St. Johns	X				
COCHISE					
Benson	X				
Bisbee	X				
Douglas	X				
Huachuca City	X				
Sierra Vista	X				
Tombstone	X				
COCONINO COUNTY					
Flagstaff	X			X	
Fredonia	X				
Page	X				
Sedona	X				
Williams	X				
GILA					
Globe	X				
Hayden	X				
Miami	X				
Payson	X				
GRAHAM					
Pima	X				
Safford	X				
Thatcher	X				
GREENLEE					
Clifton	X				
LA PAZ					
Parker	X				
Quartzsite	X				
MARICOPA					
Avondale					X

[59] Frequency Band information compiled from Southwest Frequency Directory, Arizona Region, 10th Edition: 2009.

CITY AGENCY RADIO FREQUENCY BANDS					
City (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Buckeye (*migrating from)			**900***		**X**
Chandler					**X**
El Mirage					**X**
Gilbert					**X**
Glendale					**X**
Goodyear (*migrating from)			**900***		
Mesa					**X**
Paradise Valley	**X**				
Peoria					**700/800**
Phoenix					**X**
Scottsdale					**X**
Surprise					**X**
Tempe					**700/800**
Tolleson			**X**		
Wickenburg	**X**				
Youngtown				**X**	
MOHAVE					
Bullhead City	**X**				
Colorado City	**X**				
Kingman	**X**				
Lake Havasu				**X**	
NAVAJO					
Holbrook	**X**				
Pinetop-Lakeside	**X**				
Show Low	**X**				
Snowflake-Taylor	**X**				
Winslow	**X**				
PIMA					
Marana					**X**
Oro Valley				**X**	
Sahuarita	**X**	**X**			
South Tucson	**X**				
Tucson		**X**			
PINAL					
Apache Junction					**X**
Casa Grande	**X**				
Coolidge	**X**				
Eloy	**X**				

CITY AGENCY RADIO FREQUENCY BANDS					
City (By County)	VHF	UHF	800	800	800
	CONV	*CONV*	*CONV*	*TRUNK*	*P-25*
Florence	X				
Kearny	X				
Mammoth	X				
Superior	X				
SANTA CRUZ					
Nogales	X				
Patagonia	X				
YAVAPAI					
Camp Verde	X				
Chino Valley	X				
Clarkdale	X				
Cottonwood	X				
Jerome	X				
Prescott	X				
Prescott Valley	X				
Sedona	X				
YUMA					
San Luis					X
Somerton					X
Wellton					X
Yuma					X
TOTAL AGENCIES BY BAND	**53**	**12**	**2**	**5**	**7**

Fire Districts Radio Frequency Bands[60]

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	VHF	UHF	800	800	800
	CONV	*CONV*	*CONV*	*TRUNK*	*P-25*
APACHE					
Alpine Fire District	X				
Concho Volunteer Fire District	X				
Eagar Volunteer Fire Department	X				
Ganado Fire District	X				
Greer Fire District		X			
Nutrioso Volunteer Fire Department					
Puerco Valley Fire-Ambulance	X	X			

[60] Frequency Band information compiled from Southwest Frequency Directory, Arizona Region, 10th Edition: 2009.

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Saint Johns Volunteer Emergency Services	X				
Springerville Volunteer Fire Department	X				
Vernon Fire District	X				
COCHISE					
Babocomari Fire District					
Benson Volunteer Fire Department	X				
Bisbee Fire Department	X				
Bowie Fire District	X				
Cascabel Volunteer Fire Department	X				
Douglas Fire Department	X				
Elfrida Fire District	X				
Fry Fire District	X				
Huachuca City Fire Department	X				
Mescal-J6 Fire District	X				
Naco Fire District	X				
North Whetstone Vol. Fire Department					
Palominas Fire Department	X				
PBW Fire District	X				
Pirtleville Fire District	X				
Pomrene Fire District	X				
Portal Fire and Rescue	X				
San Simon Volunteer Fire District	X				
Saint David Fire Department					
Sierra Vista Fire Department	X				
St. David Fire Department	X				
Sunsites Pearce Fire District	X				
Tombstone Vol. Fire Department	X				
Whetstone Fire District	X				
Willcox Fire Department	X				
Willcox Rural Fire Department	X				
COCONINO COUNTY					
Blue Ridge Fire District	X				
Camp Navajo Fire Department					
Flagstaff Fire Department	X				
Flagstaff Ranch Fire District	X				
Forest Lakes Fire District	X				
Fort Valley Fire District	X				
Fredonia Fire District					

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Grand Canyon National Park Airport Fire Department	X				
Greenhaven Fire District					
High Country Fire Rescue	X				
Highlands Fire District	X				
Junipine Fire District	X				
Kaibab Estates (West) Fire District	X				
Mormon Lake Fire District	X				
Mount Elden Fire District					
Page Fire Department	X				
Pine Del Fire District					
Pinewood Fire District	X				
Ponderosa Fire District	X				
Red Lake Fire Department					
San Jose Fire District					
Sanjo Fire District					
Sherwood Forest Estates Fire District	X				
Summit Fire District	X				
The Woods Fire District					
Tuba City Fire Department	X				
Tusayan Fire District	X				
Valle-Wood Volunteer Fire Department					
Valley Fire Rescue					
Westwood Estate Fire District					
Williams Fire Department	X				
Xantera Fire	X				
GILA					
Canyon Fire District					
Central Heights Fire District					
Christopher Kohl's Fire District	X				
East Verde Park Fire District	X				
Gisela Valley Fire District	X				
Globe Fire Department	X				
Hayden Fire Department	X				
Hellsgate Fire District	X				
Houston Mesa Fire District	X				
Miami Volunteer Fire Department	X				
Payson Fire Department	X				
Pine Strawberry Fire Department	X				

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Pleasant Valley Fire District	X				
Roosevelt Fire District	X				
Round Valley/Ox Bow Fire District	X				
San Carlos Apache Fire/EMS	X				
Tonto Basin Fire District	X				
Tri-City Fire District	X				
Whispering Pines Fire District	X				
Winkelman Fire Department	X				
GRAHAM					
Bylas Fire Department					
Fort Thomas Fire Department	X				
Graham County Vol. Fire Department					
Pima Rural Fire District	X				
Safford Rural Fire District	X				
Thatcher	X				
GREENLEE					
Clifton Fire Department	X				
Duncan Fire Department		X			
Duncan Valley Fire District		X			
Freeport McMoran Morenci Mine Fire Department	X				
LA PAZ					
Bouse Volunteer Fire District	X				
Buckskin Fire District	X				
Colorado River Indian Tribe Fire Department		X			
Ehrenberg Fire District	X				
La Paz County Fire Departments	X				
McMullen Fire District	X				
Parker Volunteer Fire District	X				
Quartzsite Fire District	X				
MARICOPA					
Aguila Fire District	X				
Avondale Fire Department *	X			X	X
Buckeye Fire Department *	X			X	X
Buckeye Valley Fire District *	X			X	X
Carefree Fire Department	X				
Chandler Fire Department *	X			X	X
Circle City / Morristown Fire District	X				
Daisy Mountain Fire District *	X			X	X

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
El Mirage Fire Department *	X			X	X
Fountain Hills Fire District	X				
Gila Bend Volunteer Fire District	X				
Gilbert Fire Department				X	X
Glendale Fire Department *	X			X	X
Goodyear Fire Department *	X			X	X
Guadalupe Fire Department *	X			X	X
Harquahala Valley Fire District *	X			X	X
Laveen Fire District *	X			X	X
Mesa Fire Department				X	X
Peoria Fire Department *	X			X	X
Phoenix Fire Department *	X			X	X
Queen Creek Fire Department				X	X
Rio Verde Fire District	X				
Rural/Metro - East Mesa Fire Department	X				
Rural/Metro - Litchfield Park	X				
Rural/Metro - West Maricopa	X				
Scottsdale Fire Department *	X			X	X
Sun City Fire District *	X			X	X
Sun City West Fire District *	X			X	X
Sun Lakes Fire District *	X			X	X
Surprise Fire Department *	X			X	X
Tempe Fire Department *	X			X	X
Tolleson Fire Department *	X			X	X
Tonopah Valley Fire District	X				
Tonto Hills Volunteer Fire Department	X				
Wickenburg Fire Department	X				
Wittmann Fire District	X				
MOHAVE					
Beaver Dam-Littlefield Fire District	X				
Bullhead City Fire District	X				
Colorado City Fire District	X				
Desert Hills Fire District	X				
Fort Mohave Mesa Indian Fire District	X				
Golden Shores Fire District	X				
Golden Valley Fire District	X				
Grapevine Mesa Fire District	X				
Hildale Fire Department	X				

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Kingman Fire Department	X				
Lake Havasu City Fire Department				X	
Lake Mohave Ranchos Fire District	X				
Mohave Valley Fire District	X				
Northern Arizona Consolidated Fire District #1	X				
Oatman Fire District	X				
Peach Springs Fire Department					
Pine Lake Fire District	X				
Pinion Pine Fire District	X				
Wickieup Fire District					
Yucca Fire District	X				
NAVAJO					
Chinle Community Fire Department	X				
Clay Springs-Pinedale Fire District	X				
Heber-Overgaard Fire District	X				
Holbrook Volunteer Fire Department	X				
Joseph City Fire District	X				
Kayenta Fire Department	X				
Lakeside Fire District	X				
Linden Fire District	X				
McLaws Road Fire District					
Navajo Nation Fire Department	X				
Pinetop Fire District	X				
Show Low Fire District	X				
Snowflake Volunteer Fire Department	X				
Starlight Pines Volunteer Fire Department					
Sun Valley Volunteer Fire District	X				
Taylor Fire Department	X				
White Mountain Apache Tribe	X				
White Mountain Lake Fire District	X				
Winslow Fire Department	X				
Woodruff Fire District					
PIMA					
Ajo/Gibson Volunteer Fire Department	X				
Arivaca Fire District	X				
Corona de Tucson Fire District		X			
Drexel Heights Fire District	X	X			
Elephant Head Volunteer Fire Department					

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Golder Ranch Fire District	X				
Green Valley Fire District	X				
Helmet Peak Volunteer Fire Department	X				
Hidden Valley Fire District					
Mount Lemmon Fire District		X			
Mountain Vista Fire District					
Northwest Fire District	X				
Palo Verde Fire District					
Pasco Pueblo Fire Department	X				
Picture Rocks Fire District	X				
Rincon Valley Fire District		X			
Rural/Metro Tucson	X				
Sabino Vista Fire District					
South Tucson Fire Department	X				
Tanque Verde Valley Fire District					
Three Points Fire District	X				
Tucson Country Club Estates Fire District	X				
Tucson Fire Department		X			
PINAL					
Ak Chin Fire Department	X				
Apache Junction Fire District				X	X
Arizona City Fire District	X				
Avra Valley Fire District	X				
Casa Grande Fire Department	X				
Coolidge Fire Department	X				
Dudleyville Fire District	X				
Eloy Fire District	X				
Florence Fire Department	X				
Gila River Indian Fire Department				X	X
Kearny Volunteer Fire Department	X				
Mammoth Fire District	X				
Maricopa Fire Department	X				
Oracle Volunteer Fire District	X				
Queen Valley Fire District	X				
Regional Fire and Rescue	X				
San Manuel Fire District	X				
Stanfield Volunteer Fire District					
Superior Fire Department	X				

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Thunderbird Fire District	X				
Western Fire Department	X				
SANTA CRUZ					
Nogales Fire Department	X				
Nogales Suburban Fire District	X				
Patagonia Fire Department	X				
Rio Rico Fire District	X				
Sonoita Fire District/Emergency Service	X				
Tubac Volunteer Fire District	X				
YAVAPAI					
Ash Fork Fire District	X				
Bagdad Fire Department	X				
Black Canyon Fire District	X				
Camp Verde Fire District	X				
Central Yavapai Fire District	X				
Cherry Volunteer Fire Department					
Chino Valley Fire District	X				
Clarkdale Fire District	X				
Concentrator Fire Department					
Congress Fire District	X				
Cottonwood Fire Department	X				
Crown King Fire District	X				
Fire Team Four Vol. Fire Assoc.					
Groom Creek Fire District	X				
Jerome Volunteer Fire Department	X				
Mayer Fire District	X				
Montezuma-Rimrock Fire District	X				
Peeples Valley Fire District	X				
Prescott Fire Department	X				
Sedona Fire Department	X				
Seligman Fire District	X				
Skull Valley Fire District	X				
Southern Yavapai Fire District	X				
Verde Valley Fire District	X				
Walker Fire Protection Association	X				
Williamson Valley Fire District	X				
Yarnell Fire District	X				

FIRE DISTRICTS RADIO FREQUENCY BANDS					
Fire District (By County)	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
YUMA					
Rural/Metro Yuma	X				
San Luis Fire Department				X	X
Somerton-Cocopah Fire Department				X	X
Tacna Volunteer Fire Department				X	X
Wellton Fire Department				X	X
Yuma Fire Department				X	X
TOTAL AGENCIES BY BAND	**212**	**10**	**0**	**12**	**11**

** Agency dispatched by Phoenix Fire Department. The agency currently operates on, or is in transition to operate on 700/800 MHz for all Non Hazard Zone calls. Hazard Zone calls will continue to operate on VHF.*

Tribal Agencies Radio Frequency Bands[61]

TRIBAL AGENCIES FREQUENCY RADIO BANDS					
Tribal Nation	**VHF**	**UHF**	**800**	**800**	**800**
	CONV	***CONV***	***CONV***	***TRUNK***	***P-25***
Ak-Chin		X			
Cocopah					X
Colorado River	X				
Fort McDowell	X				
Fort Mojave	X				
Gila River					X
Hopi	X				
Hualapai	X	X			
Navajo DPS	X	X			
Pascua Yaqui			X		
Quechan	X				
Salt River	X	X			
San Carlos	X	X			
Tohono O'Odham			X		
White Mountain Apache	X				
Yavapai-Prescott	X				
Yavapai-Apache	X				

[61] Frequency Band information compiled from Southwest Frequency Directory, Arizona Region, 10th Edition: 2009.

Appendix G ARIZONA SCIP IMPLEMENTATION REPORT

Overview

The Statewide Communication Interoperability Plan (SCIP) Implementation Report provides an annual update on Arizona's progress in achieving the initiatives and strategic vision identified in the SCIP. Further, this information provides the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) with a clearer understanding of Arizona's capabilities, needs, and strategic direction for achieving interoperability statewide.

As required by Congress, States provide updates and changes to the status of their SCIP. Each State created a SCIP in 2007 and all have been regularly updated. The report sections match those required in the original SCIP, and extensive instructions were provided to the States to understand the requirements of these sections and assist in the development of their SCIPs. The initiatives within each report include milestones identified in the NECP which will be standardized, as well as State-specific efforts.

Arizona's SCIP Implementation Reports are published online on the PSIC Office website[62].

[62] http://www.azpsic.gov/library/reports/

Appendix H SHARED SYSTEMS

Shared Systems

"Shared system" refers to a single radio system used to provide service to several public safety or public service agencies. Arizona operates on multiple local, regional, and state shared LMR systems. The majority of these systems serving the more rural areas of Arizona are conventional VHF or UHF while the larger metropolitan areas have migrated, or are in the process of migrating, to 800 MHz trunked systems. The State agency systems operate mostly in the UHF and VHF radio bands, with some in 700/800 MHz.

H.1 Regional System: Pima County Wireless Integrated Network (PCWIN)

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance: PCWIN Executive Management Committee

Network Connectivity System: The backhaul communications network will include a combination of microwave links and county or city owned fiber-optic lines in a ring configuration to create a highly reliable network backbone for the voice radio system.

Regional Scope: Pima County

Brief Description of Technology: Voice Radio System: The PCWIN system will be a Motorola® Astro25 (P25 Phase II) Digital 800 MHz system that will incorporate simulcast and trunking technology. The regional "shared system" approach will provide the participating agencies with the highest level of interoperability possible. Conventional channel gateways will provide opportunity to interconnect the PCWIN radio system with other state and federal systems for interoperability with those systems. The trunked system will be augmented by simplex channels and digital vehicular repeaters to meet the communications requirements for fireground and police tactical communications. Mobile and portable radios will come from the Motorola® APX family of radios. Dispatch consoles are planned for nine dispatch locations. Dispatch equipment will consist of a Motorola® MCC7500 IP radio dispatch console system, digital backup radio control station, and accessories. Participants will have countywide radio coverage and on demand interagency interoperability.

Major Initiatives:

- Voice radio systems (19 fire agencies and 10 police and emergency services agencies)
- Emergency communications and operations center

Major Milestones:

- September 29, 2009 - executed contract with Motorola® to provide the voice radio system.
- January 2010 - executed contract with NIC to provide microwave systems
- June 2010 - executed contracts with three site development contractors
- March 2012 – Microwave installations began

- April 2012 – Eleven of twenty-seven tower sites constructed, eight under construction.
- June 2012 – Motorola factory acceptance testing to be conducted.
- March 2013 – Microwave and network installation and cutover complete.
- January 2014 – Motorola installation complete.
- 1st Quarter 2014 – User cutover

Funding Model: $92 million dollars in bonds for the development, procurement, implementation and management of a regional public safety radio system, supplemented with federal grant funding.

H.2 Regional System: Regional Wireless Cooperative (RWC)

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance: The RWC functions as a cooperative with each member agency participating in the governance process. Membership is open to all federal, state, county, local and tribal governmental entities. Governance is managed by a Board of Directors consisting of one executive representative from each member. The Board directs the operation, maintenance, planning, design, implementation and financing of the RWC. The City of Phoenix is the Administrative Managing Member of the RWC. In this role, the City of Phoenix supports many of the administrative functions of operating the system.

Regional Scope: The RWC system is designed to provide coverage over a majority of Maricopa County. Coverage also extends into the surrounding counties providing wide area interoperability as well as direct operational support over approximately 10,000 square miles. The coverage is designed to provide on-street and in-building coverage to public safety standards to accommodate law enforcement, fire, and EMS responders, as well as other public entities (transit, water, streets, etc.).

Brief Description of Technology: The RWC is a large, Public Safety radio network based on the Project 25, Phase I Standard. The network is an ASTRO 25™, Integrated Voice and Data, trunked radio system. It operates in the 700/800 MHz frequency bands and uses circuit based Simulcast, IP Simulcast, and single site trunking. The network consists of seven (7) major simulcast sub-systems and nine (9) Intelligent Site Repeaters (ISRs). The RWC is planning to move to the Project 25 Phase II, TDMA Standard in the 2017 timeframe.

Major Initiatives and Milestones: The initial system design was completed in 2000. Since that time, considerable build out and expansion has occurred within the coverage area. Several initiatives are currently underway to enhance coverage and capacity and promote interoperability. Several projects have been added to our initial planned projects and are summarized in total as follows: three new major sub-systems have been added to bring on new members in the west, southwest and northeast metropolitan areas. The capacity of several sub-systems has been upgraded to increase the ability to support interoperability and roaming throughout the network. Six (6) additional ISRs are being added to the system and are being grouped with one of the existing ISRs to provide a network of overlay sites to provide very wide area interoperability throughout a larger portion of Maricopa, Pinal and Yavapai Counties, as well as to provide a backup system in case of major system failures. Finally, several new sites have been added to existing sub-systems to provide additional coverage. Other initiatives are in the planning stages to ensure that the network is upgraded to meet the federal re-banding and narrow-banding requirements.

Funding Model: Operations and maintenance of the system is funded through a monthly charge, per subscriber unit on the system. Annually, the total operating budget is developed and divided by the number of subscriber units to determine the monthly per unit cost. Special assessments may also be used to fund needs above and beyond standard operating requirements. These include such things as system upgrades, supplemental staffing or emergency hardware replacement. Additionally, if network build out is required to provide coverage or increase capacity for a new member for the respective operational area, an analysis phase is used to determine these costs which are then assessed to the joining entity to facilitate its transition onto the RWC. Once a member, all costs are proportionately shared

among all participating members based on their respective number of subscriber units on the system.

H.3 Regional System: Phoenix Fire Regional Hazard Zone Communication System

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance: The Phoenix Fire Department is the manager of this network. Users consist of all Phoenix Fire Regional Dispatch partners, Automatic Aid partners and participating Mutual Aid agencies.

Regional Scope: The system is designed to provide coverage over a majority of Maricopa County (~2,000+ square miles), as well as portions of Pinal County. The coverage is designed to provide on-street and in-building coverage to public safety standards to accommodate fire and EMS responders, as well as other public entities as needed. Additionally, projects are in progress to further improve coverage within the Central Region to provide enhanced interoperability.

Brief Description of Technology: The system is a large, Conventional VHF Public Safety radio network. It consists of high powered mountain top and other strategically located transmitters, as well as a simulcast system serving primarily the northeast portion of the service area. A network of receiver voters provides talk-in capability from the fireground to the dispatch center.

Major Initiatives and Milestones: The system became a reality in the late 1970's when the Fire Departments from Glendale, Phoenix and Tempe joined forces to start the Automatic Aid Consortium. Since that time it has grown to over 20 departments joining forces and resources to deliver service. Each agencies radio infrastructure was added to the system as they joined, creating what is arguably the best of its kind. Since that time, considerable build out and expansion has occurred within the coverage area, which provides wide area interoperability throughout a large portion of Maricopa & Pinal Counties, while also acting as a redundant system in case of major system failures involving other networks. Several new sites are being added to provide additional coverage for members of the system. Other initiatives are in the completion stages to ensure that the network is upgraded to meet the federal narrow-banding requirements.

Funding Model: The operation and maintenance of the system is funded by all participants through Automatic Aid Inter-Governmental Agreements (IGA). Total operating costs are determined and shared among users. These would include system enhancements, hardware replacement, proportional staffing, and other costs. Cost allocation is updated annually.

H.4 Regional System: Trunked Open Arizona (TOPAZ) Regional Wireless Cooperative (TRWC)

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance: The TOPAZ Regional Wireless Cooperative (TRWC) is an unincorporated association of parties. It has an Administrative Manager (Mesa) and a Board of Directors. The Administrative Manager appoints an Executive Director with Board approval. All matters are decided by a numerical vote of the Board of Directors, with weighted voting allowed as requested by a member.

Regional Scope: The Cities of Mesa and Apache Junction, the Towns of Gilbert and Queen Creek, and the Apache Junction Fire District – system supports 5,400 fire responders.

Brief Description of Technology: The TRWC consists of a Project 25 digital trunk radio system servicing multiple jurisdictions to maximize public safety and service-oriented communications and promote interoperability. It creates radio coverage Areas and associated Area Managers that administer the area operations, infrastructure, and assets through a structure that fosters collaborative planning amongst members.

Area Managers operate their zone as a separate sub-system on the overall network. The Members within a particular zone have the ability to enhance, expand and/or increase the capacity of their zone as needed. The Area Managers are responsible for facilitating cost-recovery agreements between them and any other Member within their zone.

Major Milestones:

- November 2008 – First TRWC Board of Directors meeting, election of Chairman, Vice Chairman, and appointment of Executive Director
- March 2009 – Adoption of Fiscal Year 09/10 Budget by the Board of Directors
- September 2009 – Adoption of Policies and Procedures for operation of the Network

Funding Model: Participation in the TRWC requires a financial commitment from each participating entity. Operational, maintenance, and capital costs are designed to be completely self-funding with each subscriber paying into the TRWC. Other funding is/can be obtained through special assessment fees and grants. The Administrative Manager administers the financial portion of the model, and costs are spread equitably over the TRWC Areas and their respective system subscribers. Optional services (from Mesa) may include dispatch services and maintenance services depending upon need.

H.5 Regional System: Yuma Regional Communications System (YRCS)

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance: Yuma Regional Communications System (YRCS) Council

Regional Scope: The YRCS covers Yuma County but has extended applications via DPS and ADOT interoperability as well as interoperability with California public safety agencies.

Brief Description of Technology: The YRCS is a Motorola® P-25 ver. 7.11 digital 700/800MHz trunked shared system that serves agencies across the Yuma Region. As of 2012, there are over 3,200 subscribers on the system.

The system utilizes 60 channels across multiple talkgroups, most of which are encrypted, to enable robust operable and interoperable communications for approximately 37 public safety and service agencies and disciplines. Specifically, the YRCS services all public safety agencies in Yuma County at the state, local, and tribal level and includes support for U.S. Army and Marine Fire department operations. The YRCS additionally provides interoperability services to locally represented federal agencies.

Major Initiatives and Milestones: See Section 4.3.3 about a partnership between YRCS, DPS and PSIC.

Funding Model: The YRCS was funded with local general funds and various grants. An Intergovernmental Agreement (IGA) and by-laws are in place to provide for fees that pay for radio technical support, maintenance, and the Motorola® service contract.

H.6 Statewide System: Arizona Emergency Operations Center Network

SCIP Initiative Alignment: 5.8.3.2 Implement, Enhance and Promote Functional Regional Systems in Support of Interoperable Communications

Governance:

Network Connectivity System:

Scope: County Emergency Operations Centers (EOC)

Brief Description of Technology: ADEM partnered with Arizona Public Service (APS) in an effort to build the Arizona EOC Network. The network uses APS's 800 MHZ statewide system. Currently, ADEM has installed radios in 14 of the 15 county EOC's, along with the State EOC, the Alternate State EOC, and six (6) communications vehicles. ADEM also maintains a cache of eighty (80) portable radios on the Arizona EOC Network.

The Arizona EOC Network 800 MHZ radios provide interoperability with Palo Verde Nuclear Generating Station, Arizona Radiation Regulatory Agency, and any other agency allowed to use the APS 800 MHZ network. ADEM is also working with adjoining states to provide interstate EOC communications via the APS 800 MHz network.

Along with day-to-day operational use, ADEM conducts weekly radio checks on the Arizona EOC Network for all subscribers. The weekly checks ensure:

- Equipment is functioning properly
- Staff is familiar with radio operation
- Emergency communications procedures tested
- Pertinent information is provided to EOC's

Major Initiatives:

- APS is now in process of building their business case for an upgrade of their 800MHz radio system to a P25 digital system.

Appendix I REFERENCES

SECTION 1

- Arizona Statute A.R.S. §41-3541 and §41-3542; http://azpsic.gov/about/law.htm

SECTION 2

- Arizona State Census Data; http://2010.census.gov/2010census/data/embedstate.html?state=AZ
- Arizona Indian Affairs; http://www.indianaffairs.state.az.us/tribes_of_arizona.asp
- Arizona Peace Officer Training and Standards Board; http://www.azpost.state.az.us/
- Department of Fire, Building and Life Safety; http://www.dfbls.az.gov/
- Arizona Department of Health Services; http://www.azdhs.gov

SECTION 3

- Public Safety Communications Advisory Commission Meeting Minutes; http://www.azpsic.gov/meetings/minutes.htm
- Arizona Statute A.R.S. §41-3541 and §41-3542; http://azpsic.gov/about/law.htm
- PSIC Transition Description; http://azpsic.gov/about/transition.htm
- PSIC Office Stakeholder Sessions November 2008; http://azpsic.gov/meetings/2008/nov/Working_Session_Notes_11202008_FINAL.pdf
- PSIC Office Stakeholder Sessions February 2009; http://azpsic.gov/meetings/2009/feb24/SCIPWorkshopMeetingReport.pdf

SECTION 4

- Future initiatives and planning efforts; http://www.azpsic.gov/library/reports/
- DHS Interoperability Continuum; http://www.safecomprogram.gov/NR/rdonlyres/54F0C2DE-FA70-48DD-A56E-3A72A8F35066/0/Interoperability_Continuum_Brochure_2.pdf
- Public Safety Interoperable Communications (PSIC) Office; http://www.azpsic.gov/, http://www.azpsic.gov/plans/ARIZONA_PSIC_Office_Plan.pdf
- Arizona State Legislature under A.R.S. §41-3541 and §41-3542; http://azpsic.gov/about/law.htm
- Public Safety Communications Advisory Commission (PSCC); http://www.azpsic.gov/about/commission.htm
- PSCC Public Meeting Notes; http://www.azpsic.gov/meetings/minutes.htm
- PSCC and SIEC Working Group Information; http://www.azpsic.gov/about/commission.htm

- Arizona Open Meeting Laws (A.R.S. §38-431); http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/38/00431.htm&Title=38&DocType=ARS
- Arizona Mutual Aid Compact; http://www.dem.azdema.gov/logistics/docs/mutualaid/Final_AZ_Mutual_Aid_Compact08.pdf
- Arizona Mutual Aid Signatories; http://www.dem.azdema.gov/logistics/docs/mutualaid/signatories.pdf
- Homeland Security Presidential Directive 5 (HSPD-5); http://www.dhs.gov/xabout/laws/gc_1199894121015.shtm#1
- NIMS compliant in accordance with Arizona's Governor's Executive Order EO2005-08; http://azmemory.lib.az.us/cdm4/item_viewer.php?CISOROOT=/execorders&CISOPTR=471&CISOBOX=1&REC=8
- AIRS SOP; http://www.azpsic.gov/library/standards/default.htm
- Arizona Field Operations Guide; http://www.azchiefs.org/default.asp?pageid=15&deptid=1
- VHF, One Page Document Minimum Channel Capacity, Channel Display, Frequency Range, Narrowband Capability and P-25 Capability; http://www.azpsic.gov//library/standards/vhfminimumequipstandards.pdf
- UHF, One Page Document Minimum Channel Capacity, Channel Display, Frequency Range, Narrowband Capability and P-25 Capability; http://www.azpsic.gov//library/standards/uhfminimumequipstandards.pdf
- Arizona Statewide Training Program; http://www.dem.azdema.gov/preparedness/training/calendar.html
- ADEM Outreach Program for Training; http://www.dem.azdema.gov/preparedness/training/training.html
- ADEM Outreach Program, Exercises; http://www.dem.azdema.gov/preparedness/exercise/exercise.html
- Arizona Regional COML Recognition Procedure; http://www.azpsic.gov/library/standards/Arizona_Regional_COML_Recognition_07202010.pdf
- All-Hazards COML Information; http://www.azpsic.gov/library/coml/NIMS-CU_Policies_and_Procedures.pdf
- Arizona Communications Unit Training Coordination Procedure; http://www.azpsic.gov/meetings/minutes.htm
- AIRS Training Program; http://www.azpsic.gov/AIRS/
- Arizona Compendium of Findings and Recommendations from National Emergency Communications Plan (NECP) Goal 2 Observations; http://www.azpsic.gov/library/necp/
- Statewide Summary of Arizona's NECP Goal Two Results; http://www.azpsic.gov/library/necp/

- PSIC Office Plan; http://www.azpsic.gov/initiatives/default.htm
- Statewide Education and Outreach Plan; http://www.azpsic.gov/initiatives/default.htm

SECTION 5

- Arizona Executive Order 2007-23; http://azmemory.lib.az.us/cdm4/item_viewer.php?CISOROOT=/execorders&CISOPTR=631&CISOBOX=1&REC=12

APPENDIX B

- Arizona Commission of Tribes; http://www.indianaffairs.state.az.us/

APPENDIX E

- Current List of Commissioners; http://www.azpsic.gov
- Current list of Committee Members; http://www.azpsic.gov

APPENDIX F

- Arizona Department of Public Safety, Wireless Systems Bureau; http://www.azdps.gov/About/Organization/Technical_Services/Wireless_Systems/

APPENDIX L

- National Emergency Communications Plan; http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf

Appendix J GLOSSARY

Acronym	Definition
AAR	After Action Report
ADEM	Arizona Division of Emergency Management
ADFBLS	Arizona Department of Fire, Building and Life Safety
ADOT	Arizona Department of Transportation
AFCA	Arizona Fire Chiefs Association
AFDA	Arizona Fire District Association
AIRS	Arizona Interagency Radio System
APS	Arizona Public Service
ASFD	Arizona State Forestry Division
AZ	Arizona
AZDOHS	Arizona Department of Homeland Security
AZMAC	Arizona Mutual Aide Compact
AZPSBN	Arizona Public Safety Broadband Network
BIDP	Border Interoperability Demonstration Project
BLM	Bureau of Land Management
CAP	Corrective Action Plan
CASM	Communication Assets Survey and Mapping Tool
CCGW	Conventional Channel Gateways
COG	Continuity of Government
COML	Communications Unit Leader (All-Hazards)
COMT	Communications Unit Technician (All-Hazards)
ConOps	Concept of Operations
DEMA	Arizona Department of Emergency and Military Affairs
DHS	U.S. Department of Homeland Security
DoD	Department of Defense
DPS	Arizona Department of Public Safety
DRN	DEMA Radio Network
ECP	Emergency Communications Plan
EMPG	Emergency Management Performance Grants
EMS	Emergency Medical Service
EMSCOM	Emergency Medical Service Communications
EMT	Emergency Medical Technician
EO	Executive Order
EOC	Emergency Operations Center
F	Fahrenheit
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency

Acronym	Definition
GPD	Grants Program Directorate
HSPD-5	Homeland Security Presidential Directive 5
ICS	Incident Command System
ICTAP	Interoperable Communications Technical Assistance Program
IECGP	Interoperable Emergency Communications Grant Program
IGA	Intergovernmental Agreement
ISR	Intelligent Site Repeaters
ITAC	Information Technology Authorization Committee
IWG	Interoperability Workgroup
JLBC	Joint Legislative Budget Committee
LMR	Land Mobile Radio
MCAS	Marine Corps Air Station
MCC	Mobile Communications Center
MCDEM	Maricopa County Department of Emergency Management
MCU	Mobile Communications Unit
MCV	Mobile Communications Vehicle
MHz	Megahertz
MMRS	Metropolitan Medical Response System
MOA	Memoranda of Agreement
MOU	Memoranda of Understanding
NCSWIC	National Council of Statewide Interoperability Coordinators
NECP	National Emergency Communications Plan
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NIFOG	National Interoperability Field Operations Guide
NIMS	National Incident Management System
NIMSCAST	NIMS Compliance Assistance Support Tool
NIMS-CU	NIMS Communication Unit
NNALEA	National Native American Law Enforcement Association
NPSBN	National Public Safety Broadband Network
NPSTC	National Public Safety Telecommunications Council
NRF	National Response Framework
NTIA	National Telecommunications Information Administration
NWCG	National Wildfire Coordinating Group
OEC	Office of Emergency Communications
OPSG	Operation Stone Garden
P25	Project 25
PCWIN	Pima County Wireless Integrated Network
PFFA	Professional Fire Fighters of Arizona
PIOs	Public Information Officers
POC	Point of Contact

Acronym	Definition
PSAP	Public Safety Answering Point
PSCC	Public Safety Communications Advisory Commission
PSIC	Public Safety Interoperable Communications
PSP	Policies, Standards, & Procedures
PSWAC	Public Safety Wireless Advisory Committee
R4C	Four Corners Homeland Security Coalition
RAC	Regional Advisory Council
RECCWG	Regional Emergency Communications Coordination Working Group
RFP	Request for Proposal
RFQ	Request for Quotation
RIC	Regional Interoperability Council
RICO	Racketeer Influenced and Corrupt Organizations (ACT)
RICP	Regional Interoperable Communications Plan
RWC	Regional Wireless Cooperative (previously PRWN)
SAA	State Administrative Agency
SAIC	Science Applications International Corporation
SCIP	Statewide Communications Interoperability Plan
SCMP	Strategic Communications Migration Plan (formerly RICP)
SERRP	State of Arizona Emergency Response and Recovery Plan
SHSGP	State Homeland Security Grant Program
SIEC	Statewide Interoperability Executive Committee
SLIGP	State and Local Implementation Grant Program
SME	Subject Matter Expert
SOP	Standard Operating Procedure
STR	Strategic Technology Reserve
SWIC	Statewide Interoperability Coordinator
T&EP	Training and Exercise Plan
T&EPW	Training and Exercise Plan Workshop
TA	Technical Assistance
TCA	Target Capabilities Assessment
TICP	Tactical Interoperable Communications Plan
TOPAZ	Telecommunications Open Partnerships for Arizona (see TRWC below)
TOPOFF	Top Officials Exercise
TRWC	TOPAZ Regional Wireless Cooperative
TtT	Train-the-Trainer
TVE	TICP Validation Exercise
UASI	Urban Area Security Initiative
UHF	Ultra High Frequency
VHF	Very High Frequency
USNORTHCOM	U.S. Northern Command
WSB	Wireless Systems Bureau of DPS

Acronym	Definition
YRCS	Yuma Regional Communications System

Appendix K DHS SCIP CRITERIA CROSS REFERENCE

CRITERIA Number	Description	SCIP Section
1.0	**Background and Preliminary Steps**	
1.1	Provide an overview and background information on the state and its regions. Include geographic and demographic information.	2.0, A.1, A.2
1.2	List all agencies and organizations that participated in developing the plan	A.3
1.3	Identify the point of contact. DHS expects that each state will have a full time interoperability coordinator. The coordinator should not represent or be affiliated with any one particular discipline and should not have to balance the coordinator duties with other responsibilities.	1.0
1.4	Describe the communications and interoperability environment of the current emergency response effort.	4.0
1.5	Include a problem definition and possible solutions that addresses the challenges identified in achieving interoperability within the SAFECOM Interoperability Continuum.	5.1, 5.2
1.6	Identify any Tactical Interoperable Communications Plans in the state.	4.2.3
1.7	Set the scope and timeframe of the plan.	5.4
2.0	**Strategy**	
2.1	Describe the strategic vision, goals, and objectives for improving emergency response interagency wireless communications statewide, including how they connect with existing plans within the state.	5.2, 5.2.1, 5.2.2, 5.3, 5.8
2.2	Provide a strategic plan for coordination with neighboring states. If applicable, include a plan for coordination with neighboring countries.	5.8.1.2
2.3	Provide a strategic plan for addressing data interoperability in addition to voice interoperability.	4.3.5, 5.8.1.2
2.4	Describe a strategy for addressing catastrophic loss of communications assets by developing redundancies in the communications plan.	4.3.5, 5.8.1.2
2.5	Describe how the plan is, or will become compliant with the National Incident Management System (NIMS) and the National Response Plan.	5.6
2.6	Describe a strategy for addressing communications interoperability with the safety and security elements of the major transit systems, intercity bus service providers, ports, and passenger rail operations within the state.	5.8.1.2, 5.8.1.3
2.7	Describe the process for periodic review and revision of the state plan.	3.2

CRITERIA Number	Description	SCIP Section
3.0	**Methodology**	
3.1	Describe the method by which multi-jurisdictional, multi-disciplinary input was provided from all regions of the state. For an example of a methodology that ensures input from all regions, see the Statewide Communication Interoperability Plan, or SCIP, methodology developed by SAFECOM.	3.0, 3.1, 3.3
3.2	Define the processes for continuing to have local input and for building local support of the plan.	3.3, 3.4, 5.3
3.3	Define how the TIC Plans were incorporated into the statewide plan.	4.2.3
3.4	Describe the strategy for implementing all components of the statewide plan.	5.8
4.0	**Governance**	
4.1	Identify the executive or legislative authority for the governing body of the interoperability effort.	4.1.1, 4.1.2, Appendix D
4.2	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all the relevant emergency response disciplines and regions in the state.	4.1
4.3	Provide the charter for the governing body, and use the charter to state the principles, roles, responsibilities, and processes.	4.1.2
4.4	Identify the members of the governing body and any of its committees. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	4.1.2, 4.1.3, Appendix E
4.5	Provide a meeting schedule for the governing body.	4.1.2, 4.1.3
4.6	Describe multi-jurisdictional, multi-disciplinary agreements needed for decision-making and for sharing resources.	4.1.4
5.0	**Technology**	
5.1	Include a statewide capabilities assessment (or a plan for one) which includes, official communications equipment and related interoperability issues. At a minimum, this should include types of radio systems, data and incident management systems, the manufacturer, and frequency assignments for each major emergency responder organization within the state. Ultimately, more detailed information will be required to complete the documentation of a migration strategy. States may use the Communications Asset Survey and Mapping (CASM) tool to conduct this assessment.	4.0, 4.3, 4.3.5
5.2	Describe plans for continuing support of legacy systems, and developing interfaces among disparate systems, while migrating to newer technologies.	5.8.3.2, 5.8.3.3, 5.8.3.5
5.2.1	Describe the migration plan for moving existing technologies to newly procured technologies.	5.8.1.2

CRITERIA Number	Description	SCIP Section
5.2.2	Describe the process that will be used to ensure that new purchases comply with the statewide plan, while generally allowing existing equipment to serve out its useful life.	5.8.1.2, 5.8.3.5
6.0	**Standard Operating Procedures**	
6.1	Include an assessment of local, regional, and state operating procedures that support interoperability.	4.2, 4.2.3
6.2	Define the process by which the state, regions, and localities will develop, manage, maintain, upgrade, and communicate SOPs as appropriate.	4.2, 4.2.1, 5.8.2.1
6.3	Identify the agencies included in the development of SOPs, and the agencies expected to comply with the SOPs.	4.2, 4.2.1, 4.2.3
6.4	Demonstrate how the SOPs are NIMS compliant in terms of the ICS and preparedness.	4.2.2
7.0	**Training and Exercises**	
7.1	Define the process by which the state will develop, manage, maintain and upgrade, or coordinate as appropriate, a statewide training and exercises program.	4.4, 4.4.1, 5.8.4.1, 5.8.4.2
7.2	Describe the process for offering and requiring training and exercises, as well as any certification that will be needed.	4.4.1, 4.4.2, 4.4.3, 4.4.4,
7.3	Explain how the process ensures that the training is cross-disciplinary.	4.4, 4.4.1
8.0	**Usage**	
8.1	Describe the plan for ensuring regular usage of the relevant equipment and the SOPs needed to improve interoperability.	4.5.1, 4.5.2, 4.5.3
9.0	**Funding**	
9.1	Identify committed sources of funding, or the process for identifying and securing short- and long-term funding.	5.5
9.2	Include a plan for the development of a comprehensive funding strategy. The plan should include a process for identifying ongoing funding sources, anticipated costs, and resources needed for project management and leveraging active projects.	5.5
10.0	**Implementation**	
10.1	Describe the prioritized action plan with short- and long-term goals for achieving the objectives.	5.8
10.2	Describe the performance measures that will allow policy makers to track the progress and success of initiatives.	5.8
10.3	Describe the plan for educating policy makers and practitioners on interoperability goals and initiatives.	5.8.5.1
10.4	Describe the roles and opportunities for involvement for all local, state, and tribal agencies in the implementation of the statewide plan.	5.8

CRITERIA Number	Description	SCIP Section
10.5	Establish a plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short- and long-term funding sources.	5.0
10.6	Identify a POC responsible for implementing the plan.	1.0, 4.1.1
10.7	Describe critical success factors for implementation of the plan.	5.8
11.0	**PSIC Requirements**	
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 - the public safety spectrum in the 700 MHz frequency band 2) enable operability 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.	5.8.3.5
11.2	Describe how a Strategic Technology Reserve (STR) will be established and implemented to pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.	5.8.3.4
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	3.4, Appendix B
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).	3.4

Appendix L NATIONAL EMERGENCY COMMUNICATIONS PLAN ALIGNMENT

L.1 NECP Provisions Applicable To State Governments

The National Emergency Communications Plan (NECP)[63] identifies the following objectives, initiatives and milestones that are relevant to States to improve emergency communications for Federal, State, local, and tribal emergency responders across the Nation. The majority of the NECP objectives, initiatives and milestones, which are not listed below, apply to the Federal government, not to the States.

Objective 1. Formal decision-making structures and clearly defined leadership roles coordinate emergency communications capabilities.

Initiative 1.1: Facilitate the development of effective governance groups and designated emergency communications leadership roles.

Milestone 1.1.2: Within 12 months, all States and Territories should establish full-time statewide interoperability coordinators or equivalent positions. (p.12)

Milestone 1.1.5: Within 12 months, SIECs (AZ SIEC = PSCC, SIEC and sub-committees) in all 56 States and Territories should incorporate the recommended membership as outlined in the SCIP Guidebook and should be established via legislation or executive order by an individual State's governor. (p.13)

Initiative 1.3: Integrate strategic and tactical emergency communications planning efforts across all levels of government. Tactical and strategic coordination will eliminate unnecessary duplication of effort and maximize interagency synchronization, bringing together tactical response and strategic planning.

Milestone 1.3.2: Within 12 months, tactical planning among Federal, State, local, and tribal governments occurs at the regional interstate level. (p.14)

Objective 3. Emergency responders employ common planning and operational protocols to effectively use their resources and personnel.

Initiative 3.1: Standardize and implement common operational protocols and procedures. A national adoption of plain-language radio practices and uniform common channel naming, along with the programming and use of existing national interoperability channels, will allow agencies across all disciplines to effectively share information on demand and in real time. Using common operational protocols and procedures avoids the confusion that the use of disparate coded language systems and various tactical interoperability frequencies can create. Use of the existing nationwide

[63] http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf

interoperability channels with common naming will immediately address interoperability requirements for agencies operating in the same frequency band.

Milestone 3.1.6: Within 18 months, DHS develops training and technical assistance programs for the National Interoperability Field Operations Guide (NIFOG); (Footnote 26) programs an appropriate set of frequency / band-specific nationwide interoperability channels into all existing emergency responder radios; (Footnote 27) and preprograms an appropriate set of frequency / band-specific nationwide interoperability channels into emergency response radios that are manufactured or purchased through Federal funding as a standard requirement. (p. 22)

Footnote 27 states: Milestones in this area refer to the programming of an "appropriate set" of interoperability channels. This language is used in recognition that most radios used by emergency responders do not have the capacity to hold all of the national interoperability channels in addition to their required operational channels. Some radio channels are discipline-specific and are inappropriate to program in radios of other disciplines.

Milestone 3.1.7: Within 24 months, all SCIPs reflect plans to eliminate coded substitutions throughout the ICS, and agencies incorporate the use of existing nationwide interoperability channels into SOPs, training, and exercises at the Federal, State, regional, local, and tribal levels. (p. 22)

Initiative 3.2: Implementation of the NIMS and the National Response Framework (NRF) across all levels of government. Emergency response agencies across all levels of government should adopt and implement national-level policies and guidance to ensure a common approach to incident management and communications support. Implementation of these policies will establish clearly defined communications roles and responsibilities and enable integration of all communications elements as the ICS structure expands from the incident level to the national level.

Milestone 3.2.1: Within 12 months, all Federal, State, local, and tribal emergency response providers within UASI jurisdictions have implemented the Communications and Information Management section of the NIMS. (p.22)

Objective 7. The Nation has integrated preparedness, mitigation, response, and recovery capabilities to communicate during significant events.

Initiative 7.2: Implement disaster communications planning and preparedness activities. Identifying critical communications vulnerabilities and developing mitigation strategies is important for all agencies with operational responsibilities during major events. Agencies should evaluate the readiness posture of communications centers (e.g., Public Safety Answering Points [PSAP]) and emergency response and commercial networks that may be vulnerable to weather damage, flooding, and man-made disasters. The vulnerabilities identified should be a primary focus of disaster planning and preparedness activities. System planning activities should account for the availability of alternative and backup communications solutions and redundant pathways (i.e., provided by different vendors) to support communications if primary capabilities become unavailable.

Milestone 7.2.4: Within 24 months, complete disaster communications training and exercises for all 56 States and Territories. (p. 36)

Milestone 7.2.5: Within 24 months, all Federal, State, local, and tribal agencies in UASIs have defined alternate/backup capabilities in emergency communications plans. (p. 37)

L.2 NECP Cross Reference to Relevant State of Arizona SCIP Initiative Provisions

NECP Reference	NECP Requirement & Milestone	SCIP Initiative Provisions
Page 12 Objective 1 Initiative 1.1 Milestone 2	By 7/31/09, establish a full-time statewide interoperability coordinator or equivalent position.	▪ Relevant Related SCIP Provision: 5.8.1.1 Expand & Implement Interoperable Voice and Data Communications Governance Model & Plan 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications
Page 13 Objective 1 Initiative 1.1 Milestone 5	By 7/31/09, the SIEC (or equivalent) should incorporate the recommended membership as outlined in the SCIP Guidebook and should be established via legislation or executive order by an individual State's governor.	▪ Public Safety Communications Advisory Commission (PSCC) has legislative authority. ▪ Relevant Related SCIP Provision: 5.8.1.1 Expand & Implement Interoperable Voice and Data Communications Governance Model & Plan 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications
Page 14 Objective 1 Initiative 1.3 Milestone 2	By 7/31/09, tactical planning among Federal, State, local, and tribal governments occurs at the regional interstate level.	▪ Regional communities are responsible for tactical planning for their region. PSIC will try to increase regional involvement in PSCC/SIEC over the next year through our Governance, SOP & Outreach Initiatives. ▪ Relevant Related SCIP Provisions: 5.8.1.1 Expand & Implement Interoperable Voice and Data Communications Governance Model & Plan 5.8.1.2 Develop Regional Communications Governance Structures 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.2.1 Establish a Policies, Standards, Procedures (PSP) Framework and implement PSPs, including SOPs, for statewide interoperable communication solutions 5.8.5.1 Create and Implement an Education and Outreach Plan in support of Interoperable Communications

Pages 21-22 Objective 3 Initiative 3.1 Milestone 6	By 1/31/10, programs an appropriate set of frequency-band-specific nationwide interoperability channels into all existing emergency responder radios and preprograms an appropriate set of frequency-band-specific nationwide interoperability channels into emergency response radios that are manufactured or purchased through Federal funding as a standard requirement.	▪ Establishing national interoperability channels is a federal initiative (NECP Objective 3, Initiative 3.1, and Milestone 5). ▪ Relevant Related SCIP Provision: 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.2.1 Establish a Policies, Standards, Procedures (PSP) Framework and implement PSPs, including SOPs, for statewide interoperable communication solutions. 5.8.3.1 Complete AIRS by Deploying Remaining AIRS Suites 5.8.3.2 Implement, Enhance, and Promote Functional Regional Voice and Data Systems in Support of Interoperable Communications
Pages 21-22 Objective 3 Initiative 3.1 Milestone 7	By 7/31/10, SCIP reflect plans to eliminate coded substitutions throughout the ICS, and agencies incorporate the use of existing nationwide interoperability channels into SOPs, training, and exercises at the Federal, State, regional, local, and tribal levels.	▪ Establishing national interoperability channels is a federal initiative (NECP Objective 3, Initiative 3.1, and Milestone 5). ▪ Relevant Related SCIP Provisions: 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.2.1 Establish a Policies, Standards, Procedures (PSP) Framework and implement PSPs, including SOPs, for statewide interoperable communication solutions. 5.8.4.1 Develop & Implement a Training Plan to Address Interoperable Communications 5.8.4.2 Develop & Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications

Page 22 Objective 3 Initiative 3.2 Milestone 1	By 7/31/09, all Federal, State, local and tribal emergency response providers within UASI jurisdictions have implemented the Communications and Information Management section of the NIMS.	▪ This initiative applies to UASI jurisdictions only, not the entire State. 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.2.1 Establish a Policies, Standards, Procedures (PSP) Framework and Implement PSPs, including SOPs, for statewide interoperable communication solutions. 5.8.4.1 Develop & Implement a Training Plan to Address Interoperable Communications 5.8.4.2 Develop & Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications
Page 36 Objective 7 Initiative 7.2 Milestone 4	By 7/31/10, complete disaster communications training and exercises.	▪ Disaster communications training and exercise is an ongoing activity of ADEM and local emergency managers. ▪ Relevant Related SCIP Provision: 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.4.1 Develop & Implement a Training Plan to Address Interoperable Communications 5.8.4.2 Develop & Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications
Page 37 Objective 7 Initiative 7.2 Milestone 5	By 7/31/10, all Federal, State, local, and tribal agencies in UASIs will have defined alternate/backup capabilities in emergency communications plans.	▪ This initiative applies to UASI jurisdictions only, not the entire State. ▪ Relevant Related SCIP Provisions: 5.8.1.3 Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local, and Tribal Communications 5.8.3.4 Sustain the State Strategic Technology Reserve (STR)