STATEWIDE COMMUNICATION INTEROPERABILITY PLAN

OKLAHOMA

December 2011

Executive Overview

The Oklahoma Statewide Communication Interoperability Plan (SCIP) serves as a reference point for public safety communications practitioners and policy makers. The SCIP lists the goals, objectives, implementation steps and strategic initiatives which key stakeholders have identified to achieve Oklahoma's vision for statewide interoperability. The Oklahoma SCIP parallels a nationwide effort to improve interoperable communications supported by the U.S. Department of Homeland Security (DHS) Office of Emergency Communications (OEC) and is aligned with the National Emergency Communications Plan (NECP).

Oklahoma has adopted the SAFECOM Interoperability Continuum[1] as a guide and directional goal for seamless interoperable communications across the state. The five main elements in the Interoperability Continuum serve as a framework for the development of the SCIP and are a way to measure Oklahoma's progress toward achieving its vision for interoperable communications. All goals, objectives, implementation steps and strategic initiatives are aligned to the Interoperability Continuum, while remaining relevant to the unique needs of Oklahoma. Figure 1 depicts the SAFECOM Interoperability Continuum.

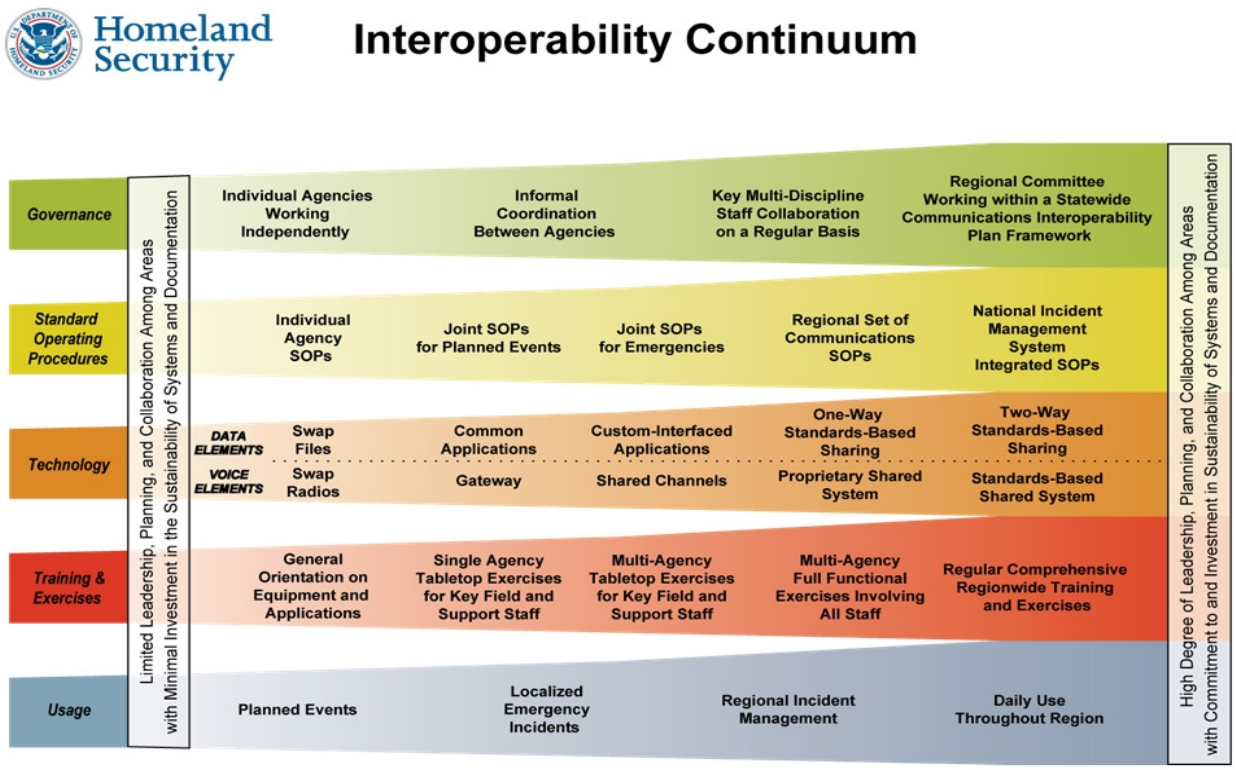

Figure 1 SAFECOM Interoperability Continuum

[1] For additional information regarding the SAFECOM Program, see Section 1.1.1.

The Oklahoma SCIP is divided into six sections:

1. **Introduction**-This section introduces the concept of interoperable communications and describes the need for such a plan. It also describes the organizations which support interoperable communications planning efforts at the state and federal levels.
2. **Background**-This section provides an overview of Oklahoma's interoperability challenges and summarizes the demographic, geographic and economic factors unique to the state as well as the natural hazards, major disasters and critical infrastructure elements that impact interoperability. This section also introduces the Statewide Interoperable Communications Planning Division and describes the Oklahoma Homeland Security Regions and formerly designated Urban Areas.
3. **Methodology**-This section describes the process by which the SCIP is annually reviewed and revised.
4. **Strategy**-This section outlines the vision, mission, goals, objectives, implementation steps and strategic initiatives that form Oklahoma's strategy for interoperable communications.
5. **Implementation of Strategy**-This section outlines Oklahoma's efforts to execute its strategy for interoperable communications. It provides additional descriptions of past, current and future projects across the state. This section is organized to reflect the SAFECOM Interoperability Continuum.
6. **Closing**-This section provides steps for the continuous support and improvement of the SCIP.

The Oklahoma SCIP is a living document reflecting past initiatives, describing current progress and projecting future plans to move toward an optimal level of interoperability throughout the state. It is updated annually to reflect adjustments made to interoperability planning and to highlight goals that have been achieved. Continuous support of the SCIP by policy makers and public safety practitioners is paramount to its successful adoption throughout the state.

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1 Introduction

In the early morning of August 31, 2000, a member of the Oklahoma City Police Department (OCPD) was in pursuit of a vehicle traveling the wrong way on Interstate 40 in downtown Oklahoma City. At the same time, a trooper with the Oklahoma Highway Patrol (OHP) was en route to assist on an unrelated call when all three vehicles collided causing them to become engulfed in flames. The two law enforcement officials, along with the two suspects, were killed in the collision. An investigation found that the officers were unaware that they were heading straight for each other due to their inability to communicate via radio.

This account provides important insight into the critical need for successful public safety interoperable communications. These law enforcement officials were from two separate agencies and utilized two separate radio systems, which were not interoperable. This catastrophe could have been prevented if seamless interoperability had existed between the agencies.

According to SAFECOM, interoperable communications refers to "the ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice and/or data with one another on demand, in real time, when needed and as authorized." Unfortunately, many public safety responders in Oklahoma cannot communicate across jurisdictions and disciplines during daily operations and emergency events. For example, when the Alfred P. Murrah Federal Building in downtown Oklahoma City was bombed in April 1995, runners equipped with golf carts were used to disseminate critical information to command posts. Effective interoperable communications may also have prevented countless deaths during the September 11th attacks on the World Trade Center and the Pentagon. *The 9/11 Commission Report*[2] describes multiple instances of public safety radio failure at the scene, including when first responders in the North Tower did not receive news of the South Tower's collapse. Had these responders been fully aware of the situation, they may have been able to evacuate the North Tower before its subsequent collapse, reducing further casualties.

The inability to relay incident scene information directly and effectively jeopardizes the lives of public safety personnel in Oklahoma and throughout the country. Incompatible and ineffective communications systems hinder, and at times prohibit, incident coordination and daily operations in almost every community across Oklahoma. As noted in the previous examples, this lack of interoperability could lead to an unnecessary loss of human life and property.

Oklahoma had long recognized the need for a SCIP but lacked the governance structure and resources to develop one. In order to correct this deficiency, Governor Brad Henry issued Executive Order 2007-42,[3] directing the Oklahoma Office of Homeland Security (OKOHS) to oversee the development and implementation of the SCIP. With OKOHS acting as the central point of contact, Oklahoma is now moving toward its goal of seamless, statewide interoperable communications.

[2] To view the 9/11 Commission Report, visit: www.9-11commission.gov/report/911Report.pdf.
[3] See Appendix A for the Executive Order.

1.1 Federal Guidance

Interoperable communications planning efforts in the state of Oklahoma parallel a nationwide effort to improve interoperability supported by DHS. This section provides an overview of the specific divisions within DHS that offer interoperable communications planning assistance to the states.

1.1.1 SAFECOM[4]

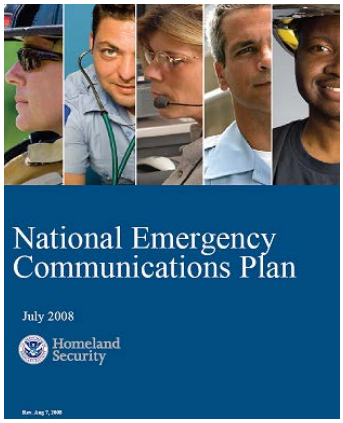
SAFECOM is a communications program of DHS. SAFECOM provides research, development, testing and evaluation, guidance, tools and templates about interoperable communications-related issues to local, tribal, state and federal emergency response agencies. Oklahoma uses the SAFECOM Interoperability Continuum as a framework for the SCIP and as a way to measure progress toward achieving its vision for interoperable communications.

1.1.2 Office of Emergency Communications (OEC)[5]

OEC supports the Secretary of Homeland Security in developing, implementing and coordinating interoperable and operable communications for the emergency response community at all levels of government. The mission of OEC is to support and promote the ability of emergency responders and government officials to continue to communicate in the event of natural disasters, acts of terrorism or other man-made disasters and work to ensure, accelerate and attain interoperable and operable emergency communications nationwide. OEC seeks to drive change in five primary areas related to emergency communications: policy and planning, coordination and collaboration, demonstration projects, grants and technical assistance. OEC also supports SAFECOM's development of guidance, tools and templates.

[4] For additional information regarding the SAFECOM Program, visit: www.safecomprogram.gov.
[5] For additional information regarding OEC, visit: www.dhs.gov.

1.2 Alignment to the National Emergency Communications Plan



The NECP[6] is a strategic plan developed by OEC that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises and disaster communications capabilities. The NECP provides recommendations, including milestones, to help emergency response providers and relevant government officials make measurable improvements in emergency communications by 2013.

Through OEC, DHS defined a series of goals that establish a minimum level of interoperable communications and a deadline for local, state, tribal and federal agencies to achieve that minimum level. These goals provide an initial set of operational targets that will be further defined by OEC through a process that engages federal, state and local governments; the private sector; and emergency responders. The initial goals are:

- **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[7] within one hour for routine events involving multiple jurisdictions and agencies. ***(Oklahoma Achieved on April 19, 2010)***
- **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. ***(Oklahoma Achieved on October 31, 2011)***
- **Goal 3**: By 2013, 75 percent of all jurisdictions are able to demonstrate response-level emergency communications within three hours of a significant event as outlined in national planning scenarios. ***(Pending)***

Oklahoma has made it a priority to achieve each of the three goals set by the NECP. Goal 1 was successfully achieved by the state of Oklahoma during the Oklahoma City National Memorial Annual Remembrance Ceremony on April 19, 2010. Goal 2 was completed by the state of Oklahoma on October 31, 2011. Approximately 56 percent of the counties in Oklahoma participated in the endeavor by submitting capability and performance data through an online portal. Oklahoma will continue to collect data from the remaining counties and will submit the results to OEC in 2012. Alignment to the NECP will continue to be a priority, as Oklahoma works toward achieving Goal 3 by its milestone date.

[6] To view the NECP, visit: http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf.
[7] Response-level emergency communications is the capacity of individuals with primary operational leadership responsibility to manage resources and make timely decisions during a multi-agency incident without technical or procedural communications impediments.

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2 Background

In order to fairly evaluate the progress of public safety communications in Oklahoma, it is important to have a general understanding of where public safety communications started and what shaped its growth. In the distant past, when radio spectrum was more plentiful and there were fewer radio users, radio systems were developed by individual agencies as needed to support their primary mission. As a support tool, radio systems were not interfaced or shared because the primary missions of those entities were not interfaced or shared.

Early radio technologies made it cumbersome to share radio resources. As communications became a critical support function, it was more important to keep radio operations protected from harmful interference—and from one another—than it was to share the resource. This insulated and unplanned manner of system development resulted in a communications environment comprised of hundreds of autonomous radio systems with thousands of Federal Communications Commission (FCC) licenses and users which cannot seamlessly interact.

The missions of public safety agencies have evolved to overlap through mutual aid and joint response for efficiency and effectiveness. Resistance to change and limited funding has held the communications capabilities of most agencies well behind the accepted standard. Adequate staffing, equipment replacement and training and exercises have been limited by a lack of available funding. Culturally, members of the public safety community have been hesitant to accept changes in governance, standard operating procedures (SOPs) and usage of radio communications. These can be attributed to the way systems have developed independently of one another. Few individual agencies can justify a business case to build an elaborate and expensive state of the art radio system on their own individual budgets, especially when it could perhaps be redundant to adjacent users. Likewise, few agencies are eager to relinquish the high degree of control they have over their own radio system to an outside authority.

Because of these issues, the state of Oklahoma has a patchwork of communications capabilities, goals and initiatives. In the Fiscal Year (FY) 2007 Homeland Security Grant Program (HSGP) Guidance, DHS called for a SCIP to be completed by each state. As the designated State Administrative Agency (SAA) for the HSGP, OKOHS was tasked with the development and implementation of the SCIP for Oklahoma. Governor Brad Henry appointed the Oklahoma Interoperability Executive Committee (OIEC) and the Governance Working Group (GWG) in March of 2007 to engage in this process. Throughout the next several months, due to the inception of the U.S. Department of Commerce Public Safety Interoperable Communications (PSIC) Grant Program, the concept of the 2007 SCIP evolved from an all encompassing interoperability document to a “plan to plan.”

In May 2009, the OIEC and the GWG were dissolved and the Statewide Interoperability Governing Body (SIGB) was formed as a single governance body in their place. This new governance structure provides for more open discussion and greater representation from the public safety community across Oklahoma. With the oversight of OKOHS and recommendations from the SIGB, it is intended that this SCIP and future versions will present a more organized approach for improving interoperable

communications in the state of Oklahoma. The Oklahoma SCIP is updated on an annual basis pursuant to state statute.

2.1 Senate Bill 1153

In order to create a more formalized process for interoperable communications planning, the Oklahoma Legislature passed SB 1153 (OSL 2009, SB 1153, c. 212, § 1).[8] This legislation is critical to interoperable communications efforts in the state of Oklahoma. First, SB 1153 names OKOHS as the central point of contact for all statewide interoperable communications planning efforts. Next, SB 1153 enumerates the planning duties for OKOHS. These duties include the following:

- Oversight and implementation of the SCIP.
- Coordination of a migration plan for use of interoperable communications technologies including aid to connect disparate systems used by public safety agencies.
- Assistance with applying for, receiving and holding authorization for frequencies and channels for state agencies.
- Authority to establish minimum mandatory standards and protocols for interoperable communications equipment purchases made by state agencies.[9]

SB 1153 makes the effort to improve statewide interoperable communications a priority in the state of Oklahoma.

[8] See Appendix B for SB 1153.
[9] For additional information regarding the *Minimum Standards for Communication Equipment Purchases*, see Section 5.3.5.

2.2 Statewide Interoperable Communications Planning Division

To effectively manage and implement the SCIP, OKOHS created the Statewide Interoperable Communications Planning Division, where the Statewide Interoperable Communications Planning Coordinator[10] (SWIC) is employed full-time. The division works closely with the SIGB and other key public safety practitioners to improve interoperable communications in the state. The SWIC also maintains close contact with representatives of OEC and other federal organizations committed to public safety interoperable communications planning. The Statewide Interoperable Communications Planning Division is responsible for the daily coordination of interoperability efforts in the state of Oklahoma and serves as the Point of Contact (POC) for this SCIP:

PRIMARY	ALTERNATE
Nikki Cassingham Statewide Interoperable Communications Planning Coordinator Oklahoma Office of Homeland Security P.O. Box 11415 Oklahoma City, OK 73136 (405) 425-2869 ncassing@dps.state.ok.us	Chelsea Grogan Statewide Interoperable Communications Planning Division Oklahoma Office of Homeland Security P.O. Box 11415 Oklahoma City, OK 73136 (405) 425-7275 cgrogan@dps.state.ok.us

2.3 State Overview

The following sections provide an overview of the Oklahoma characteristics which have the potential to impact interoperability and shape the planning efforts for interoperable communications in the state.

2.3.1 Population

The state of Oklahoma consists mainly of rural communities, but contains three metropolitan areas which comprise a majority of the state's population. Oklahoma also consists of numerous tribal jurisdictions—many of which have their own systems of government and emergency services. The expansive nature of the state, along with Oklahoma's large number of counties and tribal jurisdictions, creates a unique system of government which impacts interoperability planning.

[10] The Statewide Interoperable Communications Planning Coordinator is referred to nationally as the Statewide Interoperability Coordinator (SWIC).

Total Population

According to the U.S. Census Bureau, there are approximately 3.7 million residents in the state of Oklahoma. More than 70 percent of the state's population resides within 35 miles on either side of the Interstate 44 corridor.

Counties

There are 77 designated counties in the state of Oklahoma as depicted in Figure 2.

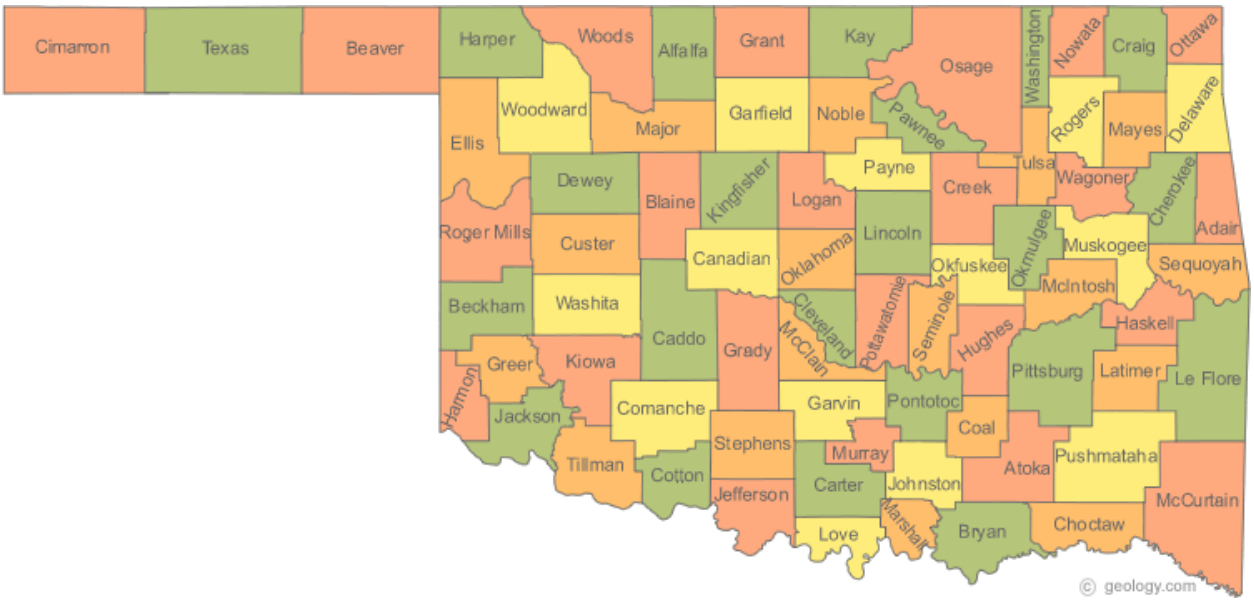

Figure 2 Oklahoma County Map[11]

Most Populous Cities

According to the U.S. Census Bureau, the most populous cities in Oklahoma include Oklahoma City, Tulsa, Norman, Broken Arrow and Lawton.

Metropolitan Areas[12]

Population statistics for the major metropolitan areas in Oklahoma are listed in Table 1:

[11] Source: http://geology.com/state-map/oklahoma.shtml.
[12] Source: Oklahoma Department of Commerce.

Metropolitan Area Population	
METROPOLITAN AREA	**POPULATION**
Lawton	111,772
Oklahoma City	1,206,142
Tulsa	916,079

Table 1 Oklahoma Population by Major Metropolitan Area

Urban Areas

There are two Urban Areas in the state of Oklahoma which are designated within the UASI Program. The Central Oklahoma UASI (COUASI) includes Oklahoma Homeland Security Regions Six and Eight. Region Six includes Logan, Lincoln, Pottawatomie, Cleveland, McClain and Canadian counties and the cities contained therein. Region Eight encompasses Oklahoma City and Oklahoma County and the cities contained therein. The COUASI Working Group is responsible for coordinating the development and implementation of all program initiatives. The Interoperable Communications Subcommittee was established to examine and address interoperable communications within the Urban Area.

In the fall of 2008, Tulsa County was designated as an Urban Area and was thus able to receive funds through the UASI Program. The Tulsa UASI encompasses Oklahoma Homeland Security Region Seven and includes Tulsa County and the cities contained therein. The Interoperable Communications Subcommittee was established in early 2009, and has since proactively prioritized a number of projects that support interoperable communications throughout Tulsa County. Representatives from both Urban Areas serve on the SIGB. Oklahoma's Urban Areas will remain recognized until the grant period ends in 2013.

Federally Recognized Tribes in Oklahoma

According to the Oklahoma Indian Affairs Commission, there are 38 federally recognized tribes in the state of Oklahoma and many provide law enforcement, fire service and Emergency Medical Service (EMS) within their jurisdictions. The federally recognized tribes in Oklahoma are listed in Table 2:

Federally Recognized Tribes		
TRIBE	**TRIBE**	**TRIBE**
Absentee Shawnee Tribe	Fort Sill Apache Tribe	Peoria Tribe of Indians
Alabama Quassarte Tribal Town	Iowa Tribe	Ponca Nation
Apache Tribe	Kaw Nation	Quapaw Tribe
Caddo Nation	Kialegee Tribal Town	Sac and Fox Nation
Cherokee Nation	Kickapoo Tribe	Seminole Nation
Cheyenne and Arapaho Tribes	Kiowa Tribe	Seneca-Cayuga Tribe
Chickasaw Nation	Miami Nation	Shawnee Tribe
Choctaw Nation	Modoc Tribe	Thlopthlocco Tribal Town
Citizen Potawatomi Nation	Muscogee (Creek) Nation	Tonkawa Tribe

Federally Recognized Tribes		
TRIBE	**TRIBE**	**TRIBE**
Comanche Nation	Osage Nation	United Keetoowah Band of Cherokees
Delaware Nation	Otoe-Missouria Tribe	Wichita & Affiliated Tribes
Delaware Tribe of Indians	Ottawa Tribe	Wyandotte Nation
Eastern Shawnee Tribe	Pawnee Nation	

Table 2 Federally Recognized Tribes in Oklahoma

2.3.2 Geography

Oklahoma's geography consists of a varying landscape which requires unique solutions for interoperability.

Land Area

According to the U.S. Census Bureau, the land area is 68,679 square miles.

Location of State

Oklahoma is bordered by Texas to the south, New Mexico to the west, Colorado to the northwest, Kansas to the north, Missouri to the northeast and Arkansas to the east.

Official Ecoregions

According to the Oklahoma Forestry Services, the state is comprised of 12 official ecoregions.

Topography[13]

The central terrain of Oklahoma is generally made up of plains, varying from nearly flat in the western part of the state, to rolling hills in the central and east-southeast. The plains are broken up by scattered mountainous areas where most points are 600 feet or less above the adjacent landscape. These small mountainous areas include the Wichitas in the southwest, the Arbuckles in the south central area and the Ouachitas in the southeast. Extreme northeast counties are part of the Ozark Plateau, which is marked by steep, rocky river valleys between large areas of hills and rolling plains. Black Mesa, which is located in the far western corner of the Oklahoma panhandle, is the state's highest elevation at 4,973 feet above sea level. The lowest elevation in the state (287 feet) is located in the far southeast, east of Idabel in McCurtain County. Elevations in Oklahoma are depicted in Figure 3.

[13] Information for this section was provided by the Oklahoma Almanac 2007/2008, Fifty-First Edition.

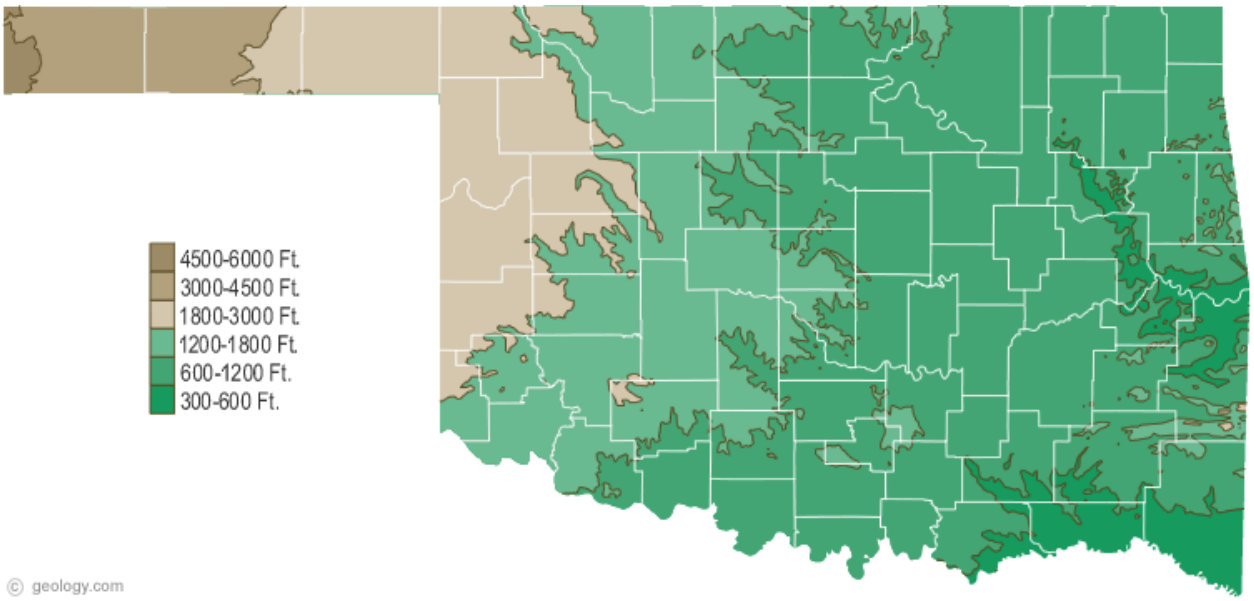

Figure 3 Oklahoma Elevation Map[14]

2.3.3 Major Economic Contributions

The state of Oklahoma plays a key role in both the national and global economies. According to the Oklahoma Department of Commerce, Oklahoma exports products to more than 176 countries every year, and in 2010, Oklahoma exports totaled $5.4 billion. The two major industries in Oklahoma are energy production and agriculture.

Energy Production[15]

Fossil fuels are among Oklahoma's critical economic assets and a cornerstone of the national economy. One in seven jobs in Oklahoma is directly or indirectly supported by the oil and natural gas industry. Oklahoma is the sixth leading producer of crude oil and the third largest producer of natural gas in the nation. Eight percent of the country's natural gas liquid reserves are located in Oklahoma. There are approximately 125,000 active oil and natural gas wells in the state, producing some 65 million barrels of oil annually. Oil and natural gas production is a $51.7 billion industry in Oklahoma.

Chief Agricultural Products

The chief agricultural products in Oklahoma include cattle, hogs, poultry, sheep, milk, wheat, hay, sorghum, peanuts and cotton. According to the U.S. Department of Agriculture's National Agriculture

[14] Source: http://geology.com/state-map/oklahoma.shtml.
[15] Information for this section was provided by OERB.

Statistics Division, there are approximately 83,500 farms in Oklahoma, and the state is ranked first in the country in rye production and fourth in the country for cattle and calf production.

2.3.4 Critical Infrastructure

A number of critical infrastructure elements exist in the state of Oklahoma including an active waterway system, three major interstates, two international airports, military installations, important weather forecasting facilities and a pipeline junction.

Waterways[16]

Within the state of Oklahoma there are more than one million surface-acres of water and 2,000 more miles of shoreline than the Atlantic and Gulf coasts combined. Oklahoma has 34 major reservoirs and 200 man-made lakes—more than any other state in the nation. All of the major lakes are man-made, developed by the federal government to control flooding and for conservation purposes, navigation, recreation, power and municipal water supply. Lake Texoma crosses the Oklahoma and Texas borders and has a surface area of more than 89,000 acres, making it one the largest reservoirs and the most visited in the nation. Lake Eufaula is the largest lake in Oklahoma with more than 105,000 surface acres of water. It attracts hundreds of thousands of visitors annually. Other major Oklahoma lakes include Grand Lake O' the Cherokees, Fort Gibson, Oologah, Kerr, Pine Creek, Broken Bow, Keystone and Tenkiller.

Along with reservoirs and lakes, Oklahoma has many crucial rivers. The Red River begins in the Texas panhandle and flows east, becoming the southern border of Oklahoma. It continues eastward and empties into the Atchafalaya and Mississippi rivers. The Red River is dammed to form Lake Texoma. The Canadian River is another important waterway in the state. It is the largest branch of the Arkansas River and is approximately 760 miles long. It passes just south of Oklahoma City and is dammed to form Lake Eufaula.

Although it is land-locked, Oklahoma has a very active waterway in the eastern region of the state. The McClellan-Kerr Arkansas River Navigation System (MKARNS) is a 440-mile waterway that is the site of the Ports of Catoosa and Muskogee and Port 33. The Army Corps of Engineers began building the MKARNS in 1952, and the waterway became operational in 1970. Millions of tons of cargo—sand, rock, fertilizer, wheat, steel and petroleum products—are transported to and from the Oklahoma ports every year. The nation's most inland waterway system links Oklahoma with domestic and foreign ports via the Ports of New Orleans and Houston along the Arkansas and Mississippi Rivers. Recently, the Ports of New Orleans and Catoosa joined ranks to promote the Arkansas and Mississippi Rivers as an all water route for cargo.

[16] Information for this section was provided by the Oklahoma Almanac 2007/2008, Fifty-First Edition.

The Ogallala Aquifer is Oklahoma's largest groundwater basin. It is in the western part of the state and contains 86.6 million acre-feet of water—enough to cover the state two feet deep. The major waterways in Oklahoma are depicted in Figure 4.

Figure 4 Waterway Map of Oklahoma[17]

Major Highway Systems

Three major interstates spanning the nation intersect in Oklahoma, including Interstate 40, Interstate 35 and Interstate 44. I-40 begins in California and ends in North Carolina, and it spans more than 300 miles through central Oklahoma. It enters Oklahoma in the west near Sayre and exits Oklahoma in the east at Sallisaw, just outside of Fort Smith, Arkansas. I-35 spans 235 miles through central Oklahoma and runs through a majority of the Oklahoma City metropolitan area, including the cities of Norman, Moore and Edmond. It enters southern Oklahoma at the Texas border and ends in northern Oklahoma at the Kansas border. I-44 spans 329 miles across Oklahoma to the Missouri state line, with portions running parallel to historic Route 66.

U.S. Highway 69 is another major transportation route that begins in southern Texas, as Highway 87, and ends in Minnesota. It extends throughout the entire state of Oklahoma. In addition to its many interstates and highways, the state of Oklahoma has 10 toll roads, equaling approximately 606 miles, according to the Oklahoma Department of Transportation (ODOT). Oklahoma's major roadways are depicted in Figure 5.

[17] Source: http://geology.com/state-map/oklahoma.shtml.

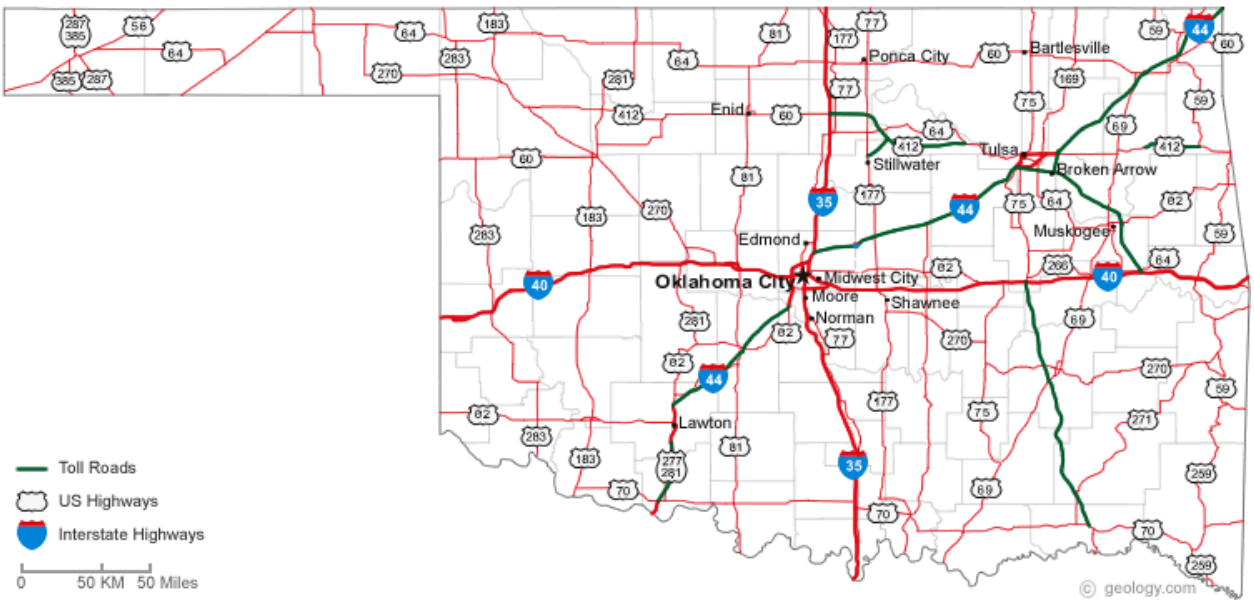

Figure 5 Oklahoma Road Map[18]

Bridges

According to ODOT, Oklahoma's public road and highway system includes 22,853 bridges.

Airports[19]

There are two major airports in Oklahoma: Will Rogers World Airport and Tulsa International Airport. There were 123 publicly owned airports and 326 privately-owned landing sites, 116 of which are open to public use, as of 2005. There was also one privately-owned, public use seaplane base in the state of Oklahoma as of 2005.

Will Rogers World Airport is located in southwestern Oklahoma City and is the principal commercial airport of the Oklahoma City metropolitan area. In 2007, approximately 3.74 million passengers passed through Will Rogers World Airport, making it the busiest passenger airport in the state. Will Rogers World Airport hosts more than 85 daily departures with non-stop service to 23 U.S. cities.

The Federal Aviation Administration (FAA), located on the Will Rogers World Airport grounds, includes the headquarters for the Air Route Traffic Control and Training Academy. It also houses the Mike Monroney Aeronautical Center, which is home to the largest concentration of Department of Transportation personnel outside of Washington, D.C. There are six major facilities located at the Aeronautical Center and they include:

- Civil Aerospace Medical Institute
- FAA Academy

[18] Source: http://geology.com/state-map/oklahoma.shtml.
[19] Information for this section was provided by the Oklahoma Almanac 2007/2008, Fifty-First Edition.

- Civil Aviation Registry
- FAA Logistics Center
- Transportation Safety Institute
- Transportation Security Administration Security Enforcement Training Academy

The Customs and Border Protection (CBP) facility is also located at the Will Rogers World Airport. The National Air Training Center houses flight training and maintenance operations. Currently, about 250 CBP employees attend aviation-related training at the center each year.

Will Rogers World Airport is also the site of the Federal Transfer Center (FTC) and an air fleet operations center of the Justice Prisoner and Alien Transportation System (JPATS). According to the Federal Bureau of Prisons, the FTC is an administrative facility housing male and female holdover offenders. JPATS is a branch of the U.S. Marshals Service and is one of the largest transporters of prisoners in the world. According to the U.S. Marshals Service, JPATS transports sentenced prisoners and aliens who are in the custody of the Federal Bureau of Prisons as well as Bureau of Immigration and Customs Enforcement to hearings, court appearances and detention facilities.

Tulsa International Airport is a city-owned, public-use airport located five miles northeast of the city of Tulsa. Tulsa International Airport hosts more than 25 daily departures with non-stop service to 15 U.S. cities. It is an American Airlines maintenance headquarters and was once an important testing and production facility for McDonnell Douglas.

Railways

According to ODOT, there are 22 railroad companies that operate on approximately 3,746 miles of track of which the State of Oklahoma owns approximately 869 total miles. The Heartland Flyer, which is a daily passenger rail service operated by Amtrak, currently provides a 206-mile route between Oklahoma City and Fort Worth, TX. Approximately 81,000 passengers travel this route annually.

Cushing Pipeline Junction

Located in Cushing, Oklahoma, the Cushing Pipeline Junction (CPJ) is the largest pipeline gathering facility and crude oil trading hub in the nation. The CPJ is responsible for handling up to 40% of the crude oil flow from the Gulf Coast region to the Midwest region as well as storing 20% of the Midwest Region crude supply.

Military Installations

Several military installations are located in Oklahoma including Fort Sill in Lawton, which is the field artillery training location for all branches of the United States military; Altus Air Force base in Altus; the McAlester Army Ammunition Plant in McAlester; Vance Air Force Base in Enid; and Tinker Air Force Base, located near Oklahoma City.

Tinker Air Force Base is the site of eight major Department of Defense, Air Force and Navy critical national defense missions and employs more than 27,000 civilians. It is also the site of the Oklahoma

City Air Logistics Center—the largest Air Logistics Center in the Air Force Materiel Command. It provides depot maintenance, management expertise, services and supply chain management as well as installation, services and information support for 31 weapon systems, 10 commands, 93 Air Force bases and 46 foreign nations. The 72nd Air Base Wing is the host organization for Tinker Air Force Base. The wing provides base installation and support services for the Oklahoma City Air Logistics Center and more than 45 associate units assigned to six major commands, including the largest flying associate wing in Air Combat Command, the Navy's Strategic Communications Wing ONE and several defense agencies.[20]

The McAlester Army Ammunition Plant is located in southeast Oklahoma and is an active Army ammunition production, storage, disposal and training installation. It has been in operation for more than 60 years. The McAlester Army Ammunition Plant was originally commissioned as the McAlester Naval Ammunition Depot on May 20, 1943, and began its first production in September 1943. On October 1, 1977, the facility was transferred to the Army under the Single Manager for Conventional Ammunition Act. The McAlester Army Ammunition Plant is a government-owned/government-operated facility and the premier bomb loading facility and the largest conventional munitions storage facility in the Department of Defense.[21]

Oklahoma's Weather Network

The National Weather Service (NWS) has two Weather Forecast Offices in Oklahoma; one is located in Norman and another is in Tulsa. The NWS plays a crucial role in maintaining the safety of Americans affected by weather hazards by issuing warnings and providing severe weather information.

The National Weather Center (NWC), located in Norman, is a unique confederation of federal, state, local and University of Oklahoma organizations that work together in partnership to improve understanding of events occurring in the Earth's atmosphere over a wide range of time and space scales, in order to help reduce loss of life and property due to hazardous weather.[22]

The Oklahoma Mesonet is a world-class network of environmental monitoring stations that measure soil and atmospheric variables 24 hours a day, 365 days a year. The Mesonet is a collection of 116 towers—at least one in each county—equipped with sensors and configured to automatically relay data to a central collection point. The Mesonet monitors air and soil temperature, relative humidity, wind speed and direction, solar radiation and precipitation at each of its sites. Many of the sites measure other information of agricultural or other scientific interest. Observations are made and transmitted every five minutes. Reports are carried from the field sites to the central processing computer by a combination of radio and the dedicated high-speed telephone lines of the Oklahoma Law Enforcement Telecommunications System.[23]

[20] Information regarding Tinker Air Force Base was provided by http://www.tinker.af.mil./.
[21] Information regarding the McAlester Army Ammunition Plant was provided by http://www.mcaap.army.mil/MCAAPindex.aspx.
[22] Information was provided by the NWC.
[23] Information regarding the Oklahoma Mesonet was provided by the Oklahoma Almanac 2007/2008, Fifty-First Edition.

2.3.5 Natural Hazards

Regardless of the season, Oklahoma is at risk for natural hazards that have the ability to impact interoperability. Oklahoma's central geographic location in the country creates a foundation for a climate of different extremes. It is not uncommon for temperatures to rise to three-digit figures during the summer months or for temperatures to drop below freezing during the winter. This varying weather pattern creates an unstable environment capable of producing tornadoes, flooding, drought, wildfires and winter storms.

Tornadoes[24]

On average, 53 tornadoes occur in the state of Oklahoma annually, with 15 considered significant. The highest annual number of tornadoes on record occurred in 1999, when 145 tornadoes were recorded.

Flooding

Oklahoma lies entirely within the drainage basin of the Mississippi River and flash flooding remains a serious threat. This is particularly true in urban areas where development and removal of vegetation have increased runoff.

Drought

Drought episodes can last from a few months to several years, elevating wildfire danger and impacting municipal water use. Seasonal droughts can occur at any time of the year, and those that coincide with crop production cycles can cause billions of dollars of damage to the farm economy. Multi-season and multi-year episodes can severely impact large reservoirs, stream flow and groundwater. Because regional drought or deluge is a frequent part of Oklahoma's climate, too much or too little can severely impact agri-business, reservoir management and even municipal water supplies.

Wildfires

Wildfires are a normal part of Oklahoma's climate cycle. During periods of decreased precipitation, Oklahoma can become susceptible to severe wildfire outbreaks.

Winter Storms

Freezing rain and snow can also be a potential weather hazard in the state of Oklahoma. Major winter storms occurred in the winters of 2000-2002, 2007 and 2009-2010. On December 24, 2010, the vast majority of Oklahoma was issued a Blizzard Warning which subsequently led to one of the largest snowfalls in the Oklahoma City Metro Area. According to the NWS, the Christmas Eve Blizzard produced up to 10 inches of snowfall in many areas of the state with wind gusts up to 60 miles per hour. Travel came to a standstill with all interstates and airports closed. Governor Henry declared a state of

[24] Information was provided by the Oklahoma Almanac 2007/2008, Fifty-First Edition.

emergency for all 77 Oklahoma Counties, and nine fatalities were reported after the storm. Winter storm events such as the Christmas Eve Blizzard make transportation hazardous and have the potential to damage critical infrastructure.[25]

Earthquakes

Earthquakes are not an uncommon natural hazard in the state of Oklahoma. According to the U.S. Geological Survey, between two and six earthquakes were recorded each year from 1972-2008, but the rate of seismicity began to rise in 2008 with more than a dozen recorded. In 2009, almost 50 earthquakes were recorded and many were big enough to be felt. This activity continued in 2010 and 2011, and on November 5, 2011, the largest earthquake ever recorded in the state occurred near Prague (in central Oklahoma) and was rated a magnitude 5.6.

2.3.6 Major Disasters in Oklahoma

Oklahoma has suffered from both natural and man-made disasters and has the highest number of disasters per capita nearly every year. Between 2009 and 2011, there were 11 Presidential Disaster Declarations issued for wildfires, flooding, severe storms and tornadoes, straight-line winds and severe winter storms.

Alfred P. Murrah Federal Building Bombing

In 1995, Oklahoma City suffered the largest domestic terrorist attack on American soil. The Alfred P. Murrah Federal Building, located in downtown Oklahoma City, was the site of a calculated explosion that killed 168 people and injured hundreds more. Critical information was passed between first responders via couriers with hand-written notes due to the lack of adequate interoperable communications. The terrorists were Americans. Timothy McVeigh was arrested, charged, convicted and executed for his role in the bombing. Terry Nichols was convicted on both federal and state murder charges and was subsequently sentenced to life in prison.

May 3, 1999, Tornado Outbreak

On May 3, 1999, Oklahoma experienced 75 tornadoes in just 21 hours, resulting in 46 deaths and 800 injuries. More than 8,000 homes were destroyed and the damage total reached nearly $1.5 billion. A devastating tornado occurred in the Oklahoma City Metropolitan Area and radar observations indicated winds of 318 miles per hour—the strongest tornado ever recorded.

[25] Information was provided by the NWS.

University of Oklahoma Bombing

In 2005, the University of Oklahoma in Norman experienced an explosion outside of the Gaylord Family Memorial Stadium during a nationally televised football game with more than 85,000 people in attendance. A University of Oklahoma engineering student who had several pounds of the improvised explosive, triacetone triperoxide, in a backpack died in the event.

Interstate 40 Bridge Collapse

An accidental man-made disaster occurred on May 26, 2002, when a 600 foot section of the I-40 bridge collapsed, causing eight cars and three semi-tractor trailer rigs to plunge into the Arkansas River 60 feet below. The National Transportation Safety Board investigated the accident and determined a towboat pushing two empty barges up the MKARNS en route to the Port of Catoosa was responsible. The captain lost consciousness, causing the boat to veer off course and strike a pier, leading to the collapse. Fourteen people were killed and five were injured. Damages exceeded $30 million.

2009 Wildfires

Two major wildfire events occurred in the spring of 2009. The first, which took place near Taloga, destroyed more than 50,000 acres of land and caused the evacuation of 400 people. Eighteen fire departments were on the scene. The next substantial wildfire took place across nine counties in central and south-central Oklahoma, particularly devastating the Midwest City area. Three people were killed and 100 homes were destroyed. I-35 was closed for several hours due to the blaze.[26]

2.4 Oklahoma Homeland Security Regions

Due to the large number of counties in Oklahoma and the diverse homeland security needs throughout the state, OKOHS determined that a regional approach for homeland security planning was needed. There are eight Oklahoma Homeland Security Regions.[27] These regions have become the focal point for many areas of preparedness planning such as EMS and public health. Each region has an Oklahoma Homeland Security Regional Advisory Council, as required by the Oklahoma Homeland Security Act of 2004 (74 O.S. § 51.3). The Councils are multi-disciplinary, multi-jurisdictional and provide OKOHS with local input on homeland security issues and initiatives including the SCIP.

The Oklahoma Homeland Security Regions also form the basis of the Oklahoma Regional Response System (RRS).[28] The RRS is the cornerstone of all response efforts in Oklahoma. Whether the incident is manmade or natural—involves hazardous materials or agricultural products—the RRS is equipped and

[26] Information was provided by MSNBC.
[27] See Appendix C for the Oklahoma Regional Response System Area Map.
[28] Additional information regarding Oklahoma's Regional Response System can be found on the Oklahoma Office of Homeland Security's Website at www.homelandsecurity.ok.gov.

trained to respond. Oklahoma's state of the art, first of its kind all-hazards RRS is currently comprised of 110 units and more than 800 team members from multiple disciplines and multiple jurisdictions. The system was born out of the desire to blanket the entire state with a basic response capability and provide tactical interoperable communications solutions. While Oklahoma's major metropolitan areas have the resources and personnel to respond to any disaster, there are people and critical infrastructure in rural Oklahoma that require and deserve the same level of protection.

The RRS is designed with different levels of specialized units capable of responding to Chemical, Biological, Radiological, Nuclear and Explosive incidents as well as agricultural emergencies, technical rescue incidents, medical emergencies and natural disasters. The units were strategically placed across Oklahoma to allow for the most efficient and timely response anywhere in the state. Prior to the development of the system, these response capabilities did not exist and would have been provided by outside resources, delaying response times.

3 Methodology

This SCIP was written with the oversight of OKOHS through recommendations from the SIGB and its working groups. The support from public safety leadership across Oklahoma is critical to the successful implementation of the SCIP. To ensure that interoperable communications planning efforts are locally driven, Oklahoma created a system of governance that is representative of various public safety responders from different levels of government across the state. OKOHS has hired a full-time SWIC to be the POC for the SCIP. The SWIC maintains regular contact with each member of the SIGB to ensure continuous support of the statewide plan.

The SIGB meets on a quarterly basis to discuss interoperable communications improvements across the state. Throughout the year, input pertaining to the SCIP is requested from SIGB members and other working groups by OKOHS in order to ensure the SCIP updates are reflective of local needs.

3.1 Process for Annual Review and Revision of the SCIP

This SCIP will be updated annually to ensure that stakeholders remain current on all interoperable communications planning efforts across the state. Figure 6 depicts the process that will be followed before each revision of the SCIP.

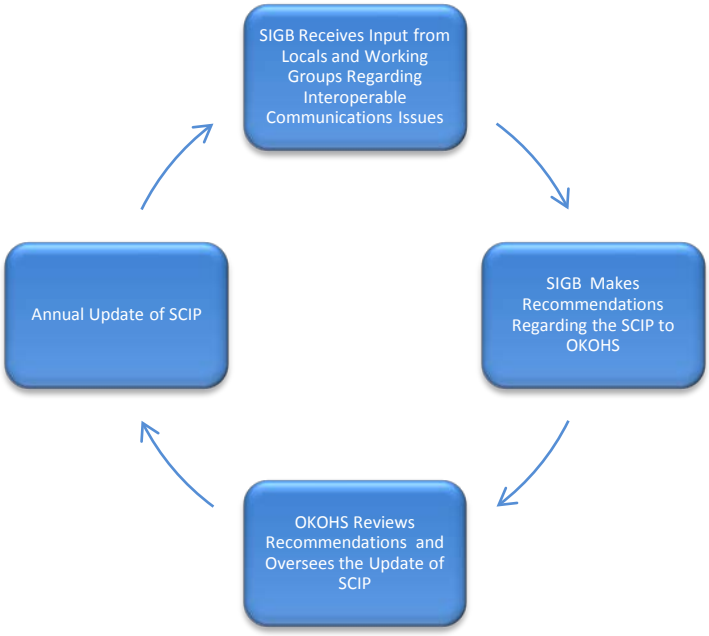

Figure 6 SCIP Revision Cycle

3.2 Scope and Timeframe

The Oklahoma SCIP will be updated on an annual basis to reflect progress in interoperable communications planning efforts and improvements across the state. Therefore, the timeframe for this plan is one year. With the recommendations from the SIGB and other stakeholders across the state of Oklahoma, OKOHS will be responsible for the oversight and maintenance of this plan.

The scope of the 2011 SCIP includes the vision, goals, objectives, implementation steps and strategic initiatives to address interoperable communications in the following elements:

- Governance
- SOPs
- Technology
- Training and Exercise
- Usage
- Funding

All objectives, implementation steps and strategic initiatives will be completed as funding and resources allow. The scope of this plan will change as the planning process matures. As new information is integrated into the planning process, and as other conditions change, this SCIP will be updated accordingly with recommendations from the SIGB and its working groups.

4 Strategy

The following strategy has been developed with input from the SIGB and its working groups and stakeholders at the local, regional, tribal, state and federal levels. This strategy draws upon the framework of the SAFECOM Interoperability Continuum while remaining relevant to Oklahoma's specific needs.

4.1 Interoperability Vision

All public safety entities in the state of Oklahoma will possess the knowledge, resources and technology to seamlessly communicate as authorized through voice and data, on demand and in real-time, during day-to-day operations and public safety events. This operating environment will ensure the effectiveness of response capabilities to mitigate potential damage to life and property that could occur from the inability to properly communicate.

4.2 Mission

The mission of the SCIP is to support the highest level of interoperable communications for all public safety entities throughout the state of Oklahoma by fostering an effective organizational structure to oversee that proper planning, training and resources are provided to responders at all levels.

4.3 Goals, Objectives and Implementation Steps

All goals within this plan are interrelated and crucial to achieving Oklahoma's vision for interoperable communications. The goals are also aligned to the SAFECOM Interoperability Continuum. Each objective in this plan is described as either short- or long-term. Short-term objectives are intended for completion in the next two years and long-term objectives are estimated to be completed after two years.

Goal 1 Formalize the governance of interoperability in the state of Oklahoma.

Objective 1.1 OKOHS is in charge of coordinating interoperability planning and support.

Status: Completed in 2007

Objective 1.2 Determine the governance structure.

Status: Completed May 2009

Objective 1.3 Formalize and sustain the SIGB.

Status: Completed December 2009

Objective 1.4 Determine and establish necessary working groups. *Short-term*

Status: Ongoing

Objective 1.5 Engage regional representatives during the development of the SCIP and its subsequent updates. *Long-term*

Status: Ongoing

Implementation Steps:

1. Inform the Oklahoma Homeland Security Regional Advisory Councils of the SCIP. (Ongoing)
2. Determine the structure for regional interoperability processes. (Ongoing)

Objective 1.6 Develop and implement a process for informing policy makers and public safety practitioners of interoperability issues and SCIP progress. *Long-term*

Status: Ongoing

Implementation Steps:

1. Publish SCIP annually. (Ongoing)
2. Provide information and education about the SCIP to policy makers and public safety practitioners. (Ongoing)
3. Inform state and local policy makers and public safety practitioners of the narrowbanding mandate and requirements. (In Process)
4. Engage county representatives in effort to collect additional data for NECP Goal 2. (In process)
5. Inform public safety practitioners of the NECP Goal 3 effort. (Pending)

6. Maintain an Interoperable Communications Website. (Ongoing)
7. Distribute an Interoperable Communications Newsletter to stakeholders. (Ongoing)
8. Enhance an outreach campaign for interoperable communications issues. (In Process)

Goal 2 SOPs are developed and modeled to conform to the elements of the National Incident Management System (NIMS).

Objective 2.1 Conduct an assessment of current state SOPs.

Status: Completed October 2009

Objective 2.2 Determine the gaps in interoperable communications SOPs.

Status: Completed December 2010

Objective 2.3 Develop SOPs to address the gaps in interoperable communications SOPs. *Short-term*

Status: In Process

Implementation Steps:

1. SOP Committee reviews OEC templates. (Completed April 2010)
2. Modify OEC templates as appropriate for local agencies. (Completed April 2010)
3. Develop templates for the eight Oklahoma Homeland Security Regions. (In Process)

Objective 2.4 Develop an Interoperable Communications Field Guide.

Status: Completed December 2010

Objective 2.5 Develop an outreach campaign for the implementation of the new SOPs. *Short-term*

Status: In Process

Implementation Steps:

1. Distribute an Interoperable Communications Field Guide. (In Process)
2. Inform the Oklahoma Homeland Security Regional Advisory Councils of the SOP template. (Pending)

Goal 3 Standards-based voice communications capabilities are developed, implemented and sustained statewide.

Objective 3.1 Conduct and evaluate a capabilities assessment of state-owned communications assets.

Status: Completed March 2008

Objective 3.2 Conduct and evaluate a capabilities assessment of local-owned communications assets.

Status: Completed October 2009

Objective 3.3 Enhance and sustain a Project 25 (P25)-compliant solution. *Long-term*

Status: In Process

Implementation Steps:

1. Add users to existing footprint. (Ongoing)
2. Continue to expand footprint across the state. (Ongoing)
3. Upgrade existing infrastructure from analog to P25 digital. (In Process)
4. Upgrade existing users from analog to digital. (In Process)
5. Maintain the operational readiness of the Oklahoma Wireless Information Network (OKWIN) system. (Ongoing)
6. Develop a strategy to link other 700/800 megahertz (MHz) shared proprietary systems to the OKWIN system. (In Process)

Objective 3.4 Migrate existing 700/800 MHz shared, proprietary systems to a standards-based solution. *Long-term*

Status: Ongoing

Implementation Steps:

1. Add users to existing footprint. (Ongoing)
2. Expand footprint. (Ongoing)
3. Upgrade existing infrastructure from analog to P25 digital. (In Process)
4. Maintain operational readiness. (Ongoing)
5. Develop a strategy to link the OKWIN system to other 700/800 MHz shared proprietary systems. (In Process)

Objective 3.5 Collaborate with existing Ultra High Frequency (UHF) and Very High Frequency (VHF) legacy systems. *Short-term*

Status: Ongoing

Implementation Steps:

1. Coordinate frequencies for template development. (In Process)
2. Inform system owners of the narrowbanding mandate and requirements. (In Process)
3. Utilize narrowband National Interoperability Channels. (In Process)
4. Develop and implement a Cross-Band Stack[29] repeater system. (In Process)
5. Determine tactical interoperable communications needs. (In Process)

Objective 3.6 Develop a communications strategy for amateur radio systems. *Long-term*

Status: Pending

Implementation Steps:

1. Determine existing capabilities. (Pending)
2. Develop a strategy for the utilization of amateur radio assets. (Pending)
3. Identify the potential usefulness of emerging technologies. (Pending)

Objective 3.7 Develop and implement a Strategic Technology Reserve (STR).

Status: Completed October 2011

Objective 3.8 Utilize the Oklahoma RRS and other communications resources to provide communications during multi-agency events. *Long-term*

Status: Ongoing

Implementation Steps:

1. Determine Oklahoma RRS capabilities. (In Process)
2. Determine Oklahoma RRS gaps. (In Process)
3. Address Oklahoma RRS gaps. (In Process)

Objective 3.9 Develop and implement voice technology standards. *Short-term*

Status: In Process

Implementation Steps:

1. Determine the authority for issuing public safety interoperable communications standards. (Completed May 2009)
2. Convene a Standards Working Group. (Completed September 2009)
3. Develop and implement a phased strategy. (Completed November 2009)
4. Publish standards annually. (In Process)

[29] For additional information regarding the Cross-Band Stack, see Section 5.3.1.

5. Develop an outreach campaign to inform policy makers and public safety practitioners of the standards. (In Process)

Goal 4 A two-way standards-based sharing data system is developed and implemented statewide.

Objective 4.1 Convene a data working group to examine data requirements for communications interoperability. *Long-term*

Status: In Process

Implementation Steps:

1. Coordinate with the state Chief Information Officer (CIO). (In Process)
2. Determine stakeholders. (In Process)
3. Conduct meetings. (In Process)
4. Stakeholders to make recommendations to the SIGB. (Pending)

Objective 4.2 Assess current public safety interoperable communications data capabilities. *Long-term*

Status: In Process

Implementation Steps:

1. Coordinate with the state CIO and utilize the state Information Technology Assessment. (In Process)

Objective 4.3 Determine current public safety interoperable communications data gaps. *Long-term*

Status: Pending

Implementation Steps:

1. Review assessment. (Pending)
2. Make recommendations to the SIGB. (Pending)

Objective 4.4 Develop a long-term data strategy for public safety interoperable communications. *Long-term*

Status: In Process

Implementation Steps:

1. Coordinate with the state CIO. (In Process)

2. Convene a data working group. (In Process)
3. Develop recommended data technology standards. (Pending)

Goal 5 A regular comprehensive statewide Training and Exercise Program is developed and implemented.

Objective 5.1 Determine current interoperable communications training needs. *Short-term*

Status: In Process

Implementation Steps:

1. Create a Training and Exercise Committee of the SIGB. (Completed May 2009)
2. Meet with Oklahoma Homeland Security Regional Advisory Councils and regional and statewide working groups for assistance in identifying training and exercise needs. (In Process)

Objective 5.2 Incorporate interoperable communications training needs into existing public safety training and exercise programs. *Long-term*

Status: Ongoing

Implementation Steps:

1. Utilize the OKOHS Training and Exercise Calendar. (Ongoing)
2. Inform public safety practitioners of interoperable communications training offerings. (Ongoing)
3. Identify new training and exercises as needed. (Ongoing)

Objective 5.3 Incorporate communications objectives into exercises conducted. *Long-term*

Status: Ongoing

Implementation Steps:

1. Utilize the OKOHS Training and Exercise Calendar. (Ongoing)
2. Ensure that exercises funded by OKOHS contain communications objectives as a condition of funding. (Ongoing)
3. Conduct training and exercises on a regular basis. (Ongoing)

Objective 5.4 Create a cadre of trained state and local Communications Unit Leader (COML) and Communications Technician (COMT) personnel able to deploy during public safety incidents. *Long-term*

Status: In Progress

Implementation Steps:

1. Establish a COML Committee to make recommendations to OKOHS regarding the Communications Unit Program. (Completed December 2010)
2. Develop a recognition procedure for Certified State of Oklahoma COMLs/COMTs. (In Process)
3. Offer All-Hazards COML and COMT training courses. (Ongoing)

Objective 5.5 Develop and implement radio equipment interoperability and operability training. *Long-term*

Status: Pending

Implementation Steps:

1. Develop mobile and portable radio operation curriculum for public safety practitioners. (Pending)
2. Implement mobile and portable radio operation training for public safety practitioners. (Pending)
3. Develop interoperability equipment curriculum for public safety practitioners. (Pending)
4. Implement interoperability equipment training for public safety practitioners. (Pending)

Goal 6 Public safety practitioners establish interoperable communications within 15 minutes of a public safety incident requiring a multi-agency response.

Objective 6.1 Conduct and evaluate the usage capacity as part of the capabilities assessment of local-owned communications assets.

Status: Completed October 2009

Objective 6.2 Establish a process to evaluate the effectiveness of current communications systems equipment. *Long-term*

Status: In Process

Implementation Steps:

1. Create a task force to address tactical communications. (Completed September 2009)
2. Evaluate the effectiveness of the Oklahoma RRS. (In Process)
3. Evaluate the effectiveness of other communications resources available for statewide response (e.g., STaR-1 and ECHO 1). (Pending)
4. Evaluate the effectiveness of multi-agency response. (In Process)

Objective 6.3 Use the Communications Assets Survey and Mapping (CASM) tool regularly for public safety communications personnel to identify capabilities and maintain knowledge of available resources. *Long-term*

Status: In Process

Implementation Steps:

1. Reintroduce the tool to stakeholders. (Completed July 2011)
2. Inform stakeholders of the tool and training opportunities. (Ongoing)
3. Encourage stakeholders to maintain current knowledge regarding interoperable communications resources. (Ongoing)

Goal 7 A comprehensive funding strategy is developed and managed to implement the elements of the SCIP and is updated annually.

Objective 7.1 Seek state funding for interoperable communications initiatives identified in the SCIP. *Long-term*

Status: Ongoing

Implementation Steps:

1. Develop an interoperable communications budget request. (Annually in October)
2. Submit a budget request to the Governor. (No later than October of every year)
3. Submit a budget request to the Oklahoma Legislature. (Annually in December)
4. Advocate for and track status of budget request. (Annually in May)

Objective 7.2 Review and apply for funding opportunities for interoperable communications through the Homeland Security Grant Program (HSGP) and other available federal grant programs. *Long-term*

Status: Ongoing

Implementation Steps:

1. Develop an interoperable communications budget. (Ongoing)
2. Allocate federal HSGP funds to interoperable communications. (Ongoing)
3. Identify and apply for funding opportunities for interoperable communications. (Ongoing)

Objective 7.3 Develop a comprehensive long-term funding strategy for interoperable communications in the state of Oklahoma. *Long-term*

Status: Ongoing

Implementation Steps:

1. Review past, present and future federal funds. (Ongoing)
2. Review past, present and future state funds. (Ongoing)
3. Review past, present and future local funds. (Ongoing)
4. Determine priorities for implementation of the strategy. (Ongoing)
5. Identify gaps in funding. (Ongoing)
6. Research additional funding opportunities. (Ongoing)
7. Develop a funding strategy. (Ongoing)

4.4 2011-2012 Strategic Initiatives

The 2011-2012 strategic initiatives are specific projects that are intended to improve interoperable communications in Oklahoma and ultimately achieve the state's vision for interoperable communications. All strategic initiatives support the goals and objectives in the Oklahoma SCIP and are aligned to the SAFECOM Interoperability Continuum. Oklahoma is in the process of implementing the following strategic initiatives statewide:

Governance Initiatives

Initiative 1: Develop and implement a process for educating policy makers and public safety practitioners regarding interoperable communications issues and the Oklahoma SCIP.

Standard Operating Procedures (SOPs) Initiatives

Initiative 2: Develop and implement SOPs for all eight Oklahoma Homeland Security Regions. ***(Region One Complete; Regions Two-Eight in Process)***

Initiative 3: Develop and distribute an Oklahoma Field Operations Guide (OKFOG).

Initiative 4: Update and publish the Tactical Interoperable Communications Plan (TIC-P) for the Central Oklahoma Urban Area.

Initiative 5: Develop and publish a TIC-P for the Tulsa Urban Area.

Technology Initiatives

Initiative 6: Create and adopt a plan for statewide narrowband compliance. ***(Phase I Complete)***

Initiative 7: Develop and implement a Strategic Technology Reserve (STR). ***(Completed September 2011)***

Initiative 8: Enhance and sustain a statewide shared 700/800 MHz system including infrastructure upgrades, additional coverage and additional users.

Initiative 9: Develop and implement plans for the continuous support of legacy systems through interfaces.

Initiative 10: Develop and implement migration plans for moving from existing technologies to newer technologies.

Initiative 11: Enhance and sustain tactical communications assets.

Initiative 12: Develop and implement voice and data technology standards for Oklahoma state agencies. ***(Phase I Complete)***

Initiative 13: Create and sustain a fixed mutual aid Cross-Band Stack repeater system.

Training and Exercise Initiatives

Initiative 14: Integrate communications components into regularly scheduled exercises.

Initiative 15: Develop and implement a process for training, exercising and deploying COML and COMT personnel across the state.

Initiative 16: Develop and implement "Radio 101" training and Mobile Gateway/Tactical Communications Bridge training for public safety practitioners.

Usage Initiatives

Initiative 17: Use CASM regularly to determine existing statewide assets and capabilities.

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5 Implementation of Strategy

This section provides additional information regarding the implementation of Oklahoma's strategy for interoperable communications.

5.1 Governance

In 2007, then Governor Brad Henry issued Executive Order 2007-42 directing OKOHS to oversee the development and implementation of the SCIP. Governor Henry recognized the need for a single point of contact for all matters involving interoperable communications planning. OKOHS was further established as the point of contact for interoperable communications planning when the Oklahoma legislature passed SB 1153 in 2009. OKOHS is also the State Administrative Agency (SAA) for federal homeland security funds.

In order to address the status of interoperability in the state of Oklahoma and comply with national standards, OKOHS hired the Statewide Interoperable Communications Planning Coordinator—known as the Statewide Interoperability Coordinator (SWIC) nationally— in 2007 to serve as the binding entity for the statewide effort. OKOHS also established a governance structure consisting of the Oklahoma Interoperability Executive Committee (OIEC) and the Governance Working Group (GWG). OKOHS recognized that this governance structure was too hierarchical in nature and that a governance structure in which each component was at the same level of authority would lead to more valued participation in the state of Oklahoma. In May 2009, OKOHS held a technical assistance (TA) workshop provided by the Office of Emergency Communications Interoperable Communications Technical Assistance Program (OEC/ICTAP) to examine the governance structure. Pursuant to recommendations from the workshop, the governance structure was revised to adopt the standards established by OEC.

OKOHS combined the OIEC and the GWG into a single body, and the current governance structure is referred to as the Statewide Interoperability Governing Body (SIGB).[30] The SIGB includes six subcommittees: Training and Exercise, Outreach, Funding, Standard Operating Procedures (SOPs), Usage and Technology. Four of the subcommittees are aligned to the SAFECOM Interoperability Continuum, while the remaining two were added to support Oklahoma's specific needs. The SIGB represents a diverse group of public safety officials from different levels of government across the state and creates a foundation for allowing each Oklahoma Homeland Security Region to identify their unique needs and contribute to statewide solutions. The SWIC serves as the chair of the SIGB. Figure 7 depicts the SIGB structure.

[30] See Appendix D for the SIGB Charter.

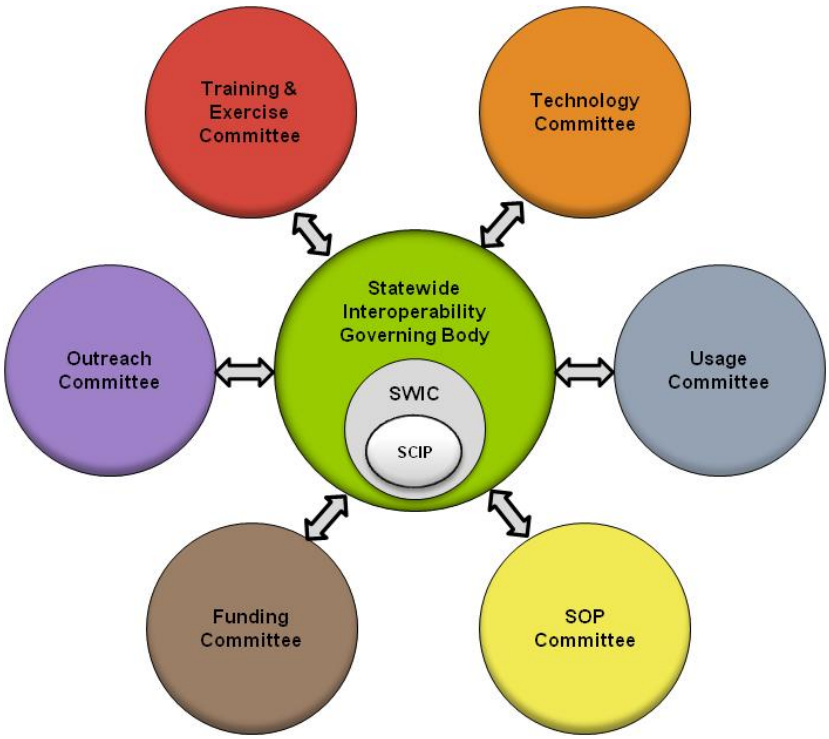


Figure 7 Statewide Interoperability Governing Body

Each component of the current governance structure is at the same level of authority, allowing for equal participation and authority from all members. The SCIP remains in the center of the SIGB, as it is the basis for all interoperable communications planning in the state. This governance approach is inclusive and encourages transparency, accountability and collaboration.

5.1.1 Outcomes

The desired outcomes of the SIGB include the following:

- Advise OKOHS on the annual revision of the SCIP.
- Advocate for the implementation of the SCIP across the state of Oklahoma.
- Suggest best practices, policies, procedures and protocols for interoperable communications.
- Ensure that training opportunities for interoperable communications are available to all necessary and authorized public safety practitioners.
- Identify and recommend future technologies that could enhance the interoperable communications capabilities in the state of Oklahoma.
- Develop an effective outreach campaign to inform public safety personnel across the state of interoperable communications issues.
- Provide recommendations for the creation of statewide SOPs.

- Ensure that appropriate and effective training and exercise programs are developed to encourage daily usage across the state.

5.1.2 Membership

The following disciplines represent the SIGB as voting members.

- Law Enforcement*
- Fire Service (including volunteer fire service)*
- EMS
- Emergency Management*
- Oklahoma Department of Public Safety (DPS)
- Federal Agency
- OKWIN Project Manager
- OKWIN Owner*
- Harris (M/A-Com) Owner
- Federally Recognized Tribe**
- Department of Health
- Military
- Oklahoma Homeland Security Region One
- Oklahoma Homeland Security Region Two
- Oklahoma Homeland Security Region Three
- Oklahoma Homeland Security Region Four
- Oklahoma Homeland Security Region Five
- COUASI
- Tulsa Urban Area Security Initiative
- ODOT
- CIO

*Both state and local jurisdictions represent these disciplines. (Law enforcement includes a representative from the county level in addition to local and state representatives.)
**Tribal representation includes more than one discipline.

The following disciplines represent the SIGB as non-voting members:

- Statewide Interoperable Communications Planning Coordinator
- Non-governmental organization (NGO)
- Utilities

To the extent possible, the following jurisdictional levels are reflected on the SIGB:

- Local
- County
- Tribal
- State
- Federal
- NGO

5.1.3 Meeting Schedule

Beginning in January 2012, the SIGB will continue to conduct quarterly meetings on the second Thursday of January, April, July and October at 9:30 a.m. Additional meetings may be called as necessary. Meetings will take place at facilities designated by OKOHS. The meeting schedule for 2012 is as follows:

- January 12
- April 12
- July 12
- October 11

5.1.4 Outreach

OKOHS continues to enhance public outreach initiatives to ensure the continued participation of the SIGB and other stakeholders as well as to make policy makers and public safety practitioners aware of current interoperable communications issues and SCIP progress. Throughout 2011, representatives of the Statewide Interoperable Communications Planning Division attended various meetings and conferences to participate in information sessions regarding a variety of topics (e.g., NECP Goal 2, Narrowbanding and the OKFOG). Associations and public safety agencies may request presentations through the Statewide Interoperable Communications Planning Coordinator.

Interoperable Communications Webpage[31]

The Statewide Interoperable Communications Planning Division has created a Webpage dedicated to statewide interoperable communications planning in Oklahoma. It includes information about planning efforts and initiatives, recent news, details regarding upcoming events and a secure portal for authorized SIGB members to view important information. The Interoperable Communications Webpage is updated on a regular basis.

[31] The Interoperable Communications Webpage is available at www.ioc.ok.gov.

Oklahoma Interoperability Newsletter

The *Oklahoma Interoperability Newsletter* is designed to be a source of information, news and updates for public safety communications stakeholders committed to interoperability in the state of Oklahoma. It is issued electronically on a quarterly basis, and it is also posted to the Interoperable Communications Webpage for public access. Oklahoma stakeholders and subject matter experts often contribute to the newsletter. Past and current issues of the *Oklahoma Interoperability Newsletter* are available on the Interoperable Communications Webpage.

5.1.5 SCIP Implementation Workshop

In February 2011, a SCIP Implementation Workshop was held in Oklahoma City. Members of the SIGB attended to discuss and update SCIP goals, objectives and strategic initiatives. An outcome of the workshop was a shared agreement regarding an effective performance measurement framework for the Oklahoma SCIP and immediate actions to support its implementation. Recommendations made by SIGB members during the workshop have been incorporated into the December 2011 SCIP update. The Statewide Interoperable Communications Planning Division will continue to work with members of the SIGB to implement the portions of the SCIP that were updated during the workshop.

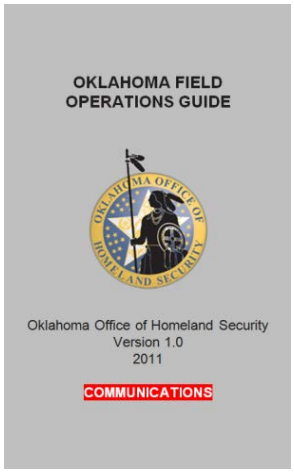
5.2 Standard Operating Procedures (SOPs)

Historically, documented SOPs in Oklahoma have existed only on a limited basis, due in part to the lack of authority, planning and collaboration among public safety entities and regions. Fortunately, with the SOP Committee of the SIGB taking an active role, along with increased collaboration between agencies and full-time leadership from the Statewide Interoperable Communications Planning Coordinator, SOPs are being more widely developed and implemented. The following specific projects are currently in progress to address the need for documented SOPs in the state of Oklahoma: an initiative to develop regional SOPs from a template created during a TA workshop, the distribution of the OKFOG and the development and update of the TIC-P for the Urban Areas.

5.2.1 Development of Regional SOPs

On April 28, 2010, a TA workshop was held in Oklahoma City to discuss the development of regional SOPs for the state of Oklahoma. The outcome of the workshop was the development of an SOP for implementation in Oklahoma Homeland Security Region One. This SOP will be used as a template for the remaining seven Oklahoma Homeland Security Regions.

5.2.2 Oklahoma Field Operations Guide (OKFOG)



The OKFOG was developed throughout 2010 and was published in the first quarter of 2011. During the development phase, stakeholder meetings were held biweekly between the SOP Committee of the SIGB, the Statewide Interoperable Communications Planning Division and representatives of L. R. Kimball, with whom OKOHS contracted to produce the document.

The OKFOG is a pocket-sized communications quick-reference booklet for first responders that:

- Provides guidance to emergency responders in the use of interoperable radio resources to be used on a day-to-day basis, as well as when they are called upon to respond outside of their normal area of operations to provide multi-agency, multi-disciplinary and multi-jurisdictional communications;
- Provides agencies with guidelines for proper use, naming, and programming of shared radio channels;
- Provides SOPs for the use of interoperable radio resources based on statewide and regional interoperability plans; and
- Provides technical reference information for radio technicians to program local agency radios for optimal interoperable capabilities.

The information in the OKFOG is intended to assist public safety personnel in identifying the proper radio channels to use when responding outside their primary service area, whether in another part of the state or to a major disaster in a different state. Oklahoma public safety agencies are encouraged to have as many of these interoperability channels programmed in their radios as possible.

In August 2011, OKOHS began distributing the OKFOG to first responders across the state. An informational presentation and a short training questionnaire are provided to attendees during distribution events. If a responder is unable to attend a distribution date, the materials may be accessed via the Interoperable Communications Website. Oklahoma public safety agencies may also send formal requests for copies of the OKFOG to IOC@dps.state.ok.us. OKOHS plans to provide updates to the OKFOG as necessary.

5.2.3 Tactical Interoperable Communications Plans (TIC-P)

In 2006, each Urban Area was required to develop a TIC-P and conduct an exercise to test the plan. The TIC-P is intended to document interoperable communications resources available within the designated area, which jurisdiction controls each resource and what rules of use or operational procedures exist for the activation and deactivation of each resource.

The Central Oklahoma Urban Area developed an initial TIC-P which was validated through a DHS-evaluated exercise on September 13, 2006, in Norman, Oklahoma. The COUASI Interoperable Communications Subcommittee is currently in the process of updating the TIC-P for the Central Oklahoma Urban Area. The current TIC-P draft is in its final review stage and will go before the COUASI Working Group for approval.

The Tulsa Urban Area—designated within the UASI Program in 2009—has begun discussions regarding the development of a TIC-P for the Tulsa Urban Area. It is expected that the TIC-P will be a priority for the subcommittee throughout 2012. Although both Urban Areas in Oklahoma will not be recognized after the grant period ends in 2013, these subcommittees have agreed to maintain regular meetings in order to continue to address interoperable communications issues. The TIC-Ps will also be maintained despite the loss of the formal UASI designations.

5.3 Technology

Historically, the voice elements of the SAFECOM Interoperability Continuum have been the primary focus of public safety entities making an effort to improve interoperable communications. As technology evolves, the need for seamless data interoperability between public safety entities is proving to be just as critical as effective voice interoperability. OKOHS is working closely with the SIGB and its working groups to develop an all encompassing plan to address the short-term and long-term goals for data interoperability. In the meantime, the 2011 SCIP will focus on voice interoperability.

5.3.1 Voice Interoperability Overview

Voice interoperability in Oklahoma varies regionally and from agency to agency. A majority of agencies in urban Oklahoma participate in proprietary shared systems. Brief descriptions of the three proprietary shared systems are listed in Table 3:

Shared Voice Communication Systems		
SYSTEM NAME	**BAND**	**DESCRIPTION**
Oklahoma Wireless Information Network (OKWIN)[32]	800 MHz	The OKWIN system is a 42 fixed site and two mobile site, 800 MHz trunked public safety communications radio system. Three additional fixed sites will be added to the existing network in 2012. OKWIN is a partnership between the city of Edmond, city of Norman, city of Shawnee, city of Tulsa, city of Owasso and the Oklahoma Department of Public Safety (DPS). All infrastructure equipment is owned and maintained by the OKWIN partners. The OKWIN system provides coverage to 70 percent of Oklahoma's population. Coverage spans along Interstate 44 from the Texas border to the Missouri border and spans south of Oklahoma City along Interstate 35 to just north of Love County, near the Texas border. Oklahoma's three largest metropolitan areas are located within the coverage area of the OKWIN system. There are more than 520 agencies and 25,000 handheld and mobile radios currently operating on the OKWIN system. The first five sites of the OKWIN system were installed in the Oklahoma City metropolitan area by DPS in the early 1980s. Additional sites in the Tulsa Metropolitan Area were added to the network when DPS and the city of Tulsa agreed to merge their two respective systems into a single system in the mid-1990s. Federal funding from the Homeland Security and Community Oriented Policing Services Grant Programs were used to integrate the cities of Edmond, Norman, Owasso and Shawnee's existing 800 MHz trunked communication systems into the OKWIN system. The OKWIN system is currently implementing the first of a three phase plan to upgrade to a standards-based P25 shared system. Briefly, the three phases of the OKWIN expansion are described as: 1. Upgrade core infrastructure to P25.[33] 2. Upgrade subscriber units to P25.

[32] For additional information regarding the OKWIN system, visit: www.okwin.ok.gov.
[33] A majority of subscriber units will need software upgrades to become P25-compliant.

Shared Voice Communication Systems		
SYSTEM NAME	**BAND**	**DESCRIPTION**
		3. Upgrade tower infrastructure to P25.[34] Upon fully migrating to a P25 shared system, the OKWIN system will be able to integrate with other P25-compliant systems located internally and externally to Oklahoma. P25 will also allow public safety entities to purchase radio equipment from multiple vendors. OKWIN is working with the Arkansas Wireless Information Network to connect the two systems utilizing P25 technology. The scope of this endeavor is still in the development process.
Oklahoma City Radio System	800 MHz	Operating in both digital and analog modes, the Oklahoma City Radio System is comprised of two rings of Harris Corporation's Enhanced Digital Access Communication System (EDACS) ProVoice simulcast. The inner ring, known as the Core System, covers the majority of Oklahoma City with seven sites and was designed for in-building penetration. The outer ring, or Wide System, covers the majority of the city limits with six sites located farther out than the Core System and is designed for handheld use outdoors. These two systems are connected by a Harris Integrated Multi-Site Controller (IMC) and operate as one system, providing 95 percent handheld coverage to more than 1,100 square miles. Units on the Core System can communicate with units on the Wide System. The IMC also functions as a gateway to many channels and talkgroups on radio systems operated by surrounding mutual aid partner agencies. Also linked to the Oklahoma City Radio System are VHF, UHF and 800 MHz National Interoperability Channels. These 8TAC, VTAC, and UTAC channels can be quickly patched to form the Cross-Band Stack providing tactical communications for a mix of responders, regardless of the frequency band in which their radios operate. The four primary Oklahoma City Police Department (OCPD) talkgroups are linked to talkgroups on the OKWIN system. This allows public safety agencies on the OKWIN system to directly monitor and communicate with

[34] All existing sites have the ability to be software upgraded to the P25 standard. Existing base stations will need to be repurposed as stand-alone P25 base stations. New base station will need to be purchased for all three existing simulcast cells.

Shared Voice Communication Systems		
SYSTEM NAME	**BAND**	**DESCRIPTION**
		OCPD units. Oklahoma City Radio System users include all city of Oklahoma City Departments and Trusts, as well as the cities of Yukon, Bethany, Warr Acres, and Mustang. Current expansion plans include migration to P25 trunking. Funding was approved for the first phase of this, which included: • Adding redundant P25 switching systems to control future P25 sites and IP-based consoles. • Linking the new P25 switches to the current Oklahoma City EDACS system so that radios on both the old and new system can operate on the same talkgroup during the transition. • Providing an IP-based gateway to radios on other systems in the Central Oklahoma area. This replaces the current Causeway system in use, and 60 ports were set up for this purpose. • Implementing an Inter-RF Subsystem Interface (ISSI) link to provide seamless IP connection to systems such as OKWIN. As of October 7, 2011, all of the above equipment had been installed and acceptance testing was completed. A temporary P25 site was brought in and used for acceptance testing. No ISSI link has been configured, awaiting completion of projects by other agencies and determination of what media/path will be used between the systems.
Broken Arrow Communications Regional Network	800 MHz	The Broken Arrow Communications Regional Network is an 800 MHz multi-site communications network comprised of the joint partnerships between the city of Broken Arrow, city of Bixby, city of Glenpool, city of Jenks and Wagoner County. The system consists of four Harris EDACS radio sites, four P25 radio sites and four OpenSky radio sites. All users can communicate with each other due to the VIDA platform utilizing IP technology—regardless of which Harris platform they currently operate on. The system also has the Harris NetworkFirst

Shared Voice Communication Systems		
SYSTEM NAME	BAND	DESCRIPTION
		Internet Protocol (IP) technology which allows users the ability to communicate directly with other radio systems—UHF, VHF, and 700/800 MHz—not directly on the Broken Arrow Communications Regional Network. The Regional Network will soon have an ISSI link to directly connect to the OKWIN system at the IP-level allowing direct communications at the user-level and the system-level.

Table 3 Shared Voice Communications Systems in Oklahoma

A significant number of rural public safety agencies located within one of the shared voice communication system's respective coverage areas utilize one of the shared systems as a primary user or as a mutual aid user. A majority of those agencies located outside of the footprint of any 800 MHz system rely on stand-alone conventional VHF technology solutions. There are a limited number of stand-alone VHF solutions in Oklahoma. Both VHF and UHF users rely heavily on swapping radios, mobile gateways and Oklahoma Interoperability Channels to interoperate with other public safety agencies. Despite using these methods, rural Oklahoma faces many challenges with interoperable communications technology. These challenges include, but are not limited to:

- A lack of funding to purchase new interoperable communications equipment.
- The FCC's approaching guidelines that will force public safety agencies nationwide to replace existing wideband equipment with narrowband-capable equipment by January 1, 2013.
- A lack of consistent interoperability plans and SOPs.

OKOHS is attempting to address these areas, as well as other areas of concern, by continuing to identify funding for new interoperable communications equipment, implementing the Oklahoma Narrowbanding Plan and distributing the OKFOG.

The primary voice interoperability goal is to develop and implement a standards-based shared system statewide. OKOHS and the SIGB recognize that a majority of public safety agencies in rural Oklahoma cannot afford to participate—or are unwilling to participate—in a standards-based shared system. Despite this reality, OKOHS and the SIGB will work with all Oklahoma public safety agencies to develop an interoperability plan that leaves no responder behind.

5.3.2 Capabilities Assessment

In order to assess the current state of public safety radio systems in the state of Oklahoma, OKOHS contracted with L.R. Kimball, a consulting firm, to complete the Interoperable Communications

Capabilities Assessment. In July 2007, OKOHS worked with the now dissolved OIEC and GWG to develop the preliminary scope of the Interoperable Communications Capabilities Assessment. It was determined that the assessment would need to be conducted in two separate but similar phases. Table 4 lists the start and finish dates for both phases of the assessment:

State and Local Assessment		
PHASE	**START DATE**	**FINISH DATE**
Phase I: State Assessment	January 2008	March 2008
Phase II: Local Assessment	October 2008	October 2009

Table 4 State and Local Assessment Start and Finish Dates

The first phase focused on state-owned public safety communications assets and was funded by the Oklahoma Legislature. Most state agencies were inventoried and after a year-long effort, data had been collected on 18,706 radios and more than 1,300 user groups (such as police, fire and EMS). After the data gathering was completed, focus-group meetings were held with public safety officials to analyze the information and to discuss the governance of their systems.

The second phase, initiated in late 2008, focused on local, county and tribal public safety communications assets and was funded through the FY 2008 Interoperable Emergency Communications Grant Program (IECGP). To capture the needs of the various independent agencies across all 77 counties in Oklahoma, an asset-inventory survey was developed. The survey explored details of local radio systems, radio system sites, system user groups, caches of interoperable radios for use in regional emergencies, mobile command vehicles, EMS dispatch procedures, mutual aid operations, SOPS, interoperability agreements, governance of interoperability programs and interoperability initiatives.

All data collected during both phases of the assessment have been loaded into the DHS Communications Assets Survey and Mapping (CASM) tool, enabling Oklahoma to become one of the first states to incorporate all of its data into CASM. All public safety agencies located in Oklahoma have the ability to view the information located in CASM.[35] Oklahoma is using the data collected in both phases of the assessment to make crucial planning decisions for the future of interoperability in the state.

5.3.3 Project 25 (P25) Planning

On June 29, 2010, a TA workshop was held in Tulsa to discuss P25 planning in the state of Oklahoma. System Owners from the OKWIN system, the Oklahoma City Radio System and representatives from multiple state and local public safety entities attended. The purpose of the workshop was to inform Oklahoma public safety officials of the P25 standard and begin discussions regarding the ISSI technology required to link the P25 systems across the state.

[35] For additional information regarding CASM, see Section 5.5.1.

In 2011, the city of Oklahoma City purchased ISSI equipment using UASI funding, and the equipment is currently in the process of being installed and tested. The Tulsa UASI has also allocated funding to purchase ISSI equipment in order to directly connect the Broken Arrow Communications Regional Network with the OKWIN system. The OKWIN system has four P25 sites and is in the process of upgrading to P25 software. System Owners from the three communications systems in Oklahoma maintain regular discussions regarding P25 planning.

5.3.4 Oklahoma Sustainment Plan

In 2011, OKOHS contracted with L.R. Kimball to conduct a study to determine the best methods for consolidating and sustaining the radio systems in Oklahoma. The Projected Sustainability Cost Development Report identifies infrastructure that could be leveraged to demonstrate a cost savings for the state of Oklahoma. L.R. Kimball delivered the final report in December 2011, and it will be presented to the Oklahoma Legislature in 2012 as part of the CIO's assessment of the state's information technology as required by the Information Technology Consolidation and Coordination Act (62 O.S. § 35.2).

5.3.5 Minimum Standards for Communication Equipment Purchases

One of the most important aspects of SB 1153 is that it gives OKOHS the ability to create standards for future purchases of equipment and infrastructure made by state agencies in support of interoperable communications in Oklahoma. The goal of these standards is to eliminate redundancy and ensure the compatibility of new purchases made by state agencies with existing technology. In fall 2009, OKOHS established the Interoperable Communications State Standards (IOCSS) Working Group. The IOCSS is composed of representatives from multiple state agencies with the purpose of making recommendations for the standards. It was imperative to include multiple agencies with a vested interest in interoperable communications to ensure the success of the minimum standards.

To comply with the November 1, 2009, deadline for state standards implementation set by the Oklahoma Legislature, OKOHS proposed that the standards be implemented in a series of phases. The first phase, *Minimum Standards for Communication Equipment Purchases: Phase I Subscribers*,[36] was published in November 2009. All purchases of interoperable communications equipment and infrastructure by state agencies in Oklahoma made after the November 1, 2009, date *must* comply with Phase I. Public safety agencies receiving funds from OKOHS for the purchase of communications equipment must also comply with the Phase I standards. It is also recommended that agencies at the local, county and tribal levels, as well authorized non-governmental organizations follow the standards

[36] See Appendix E for the *Minimum Standards for Communication Equipment Purchases*.

set by OKOHS. The IOCSS will meet as needed to establish and modify the *Minimum Standards for Communication Equipment Purchases* (e.g., tower infrastructure, repeater equipment, data connectivity and tactical equipment).

5.3.6 Narrowbanding

Throughout 2011, OKOHS implemented the Oklahoma Narrowbanding Plan. The two components of the plan consist of outreach and equipment purchases. On May 11, 2011, a Narrowbanding TA Workshop was held in Oklahoma City and more than 40 public safety communications practitioners were in attendance. The workshop, along with additional information sessions across the state, form the outreach component of the Oklahoma Narrowbanding Plan. OKOHS will continue to provide information regarding the FCC's narrowbanding mandate through 2012. Information regarding the mandate will also be updated to the Interoperable Communications Website as it becomes available.

The second component of the Oklahoma Narrowbanding Plan consists of a Narrowband-Capable Equipment Application process. Based on the 2009 Local Assessment, OKOHS determined that a number of Oklahoma public safety agencies would not meet the FCC narrowbanding mandate by the January 1, 2013, deadline. To assist with the transition, OKOHS offered a one-time opportunity for Oklahoma public safety agencies to apply for funds to be used toward the purchase of narrowband-capable equipment.

More than 130 applications were submitted to OKOHS, and 48 applicants were selected to receive funding toward the purchase of mobile and portable radios. Agencies were selected based on need and ability to provide a 25 percent funding match. Selected agencies were able to replace existing, obsolete equipment with new equipment of their choice. All equipment was required to adhere to the *Minimum Standards for Communication Equipment Purchases*.

5.3.7 Communications Resources for Statewide Deployment

In addition to the units associated with the Oklahoma Regional Response System (RRS), there are five units designed specifically to support communications during a public safety incident. These units are owned and maintained by multiple agencies and jurisdictions, and all units are available to respond statewide during a public safety incident.

The state of Oklahoma has three Mobile Communications and Command Units, referred to as Command-1, Command-2 and Command-3. All three Mobile Communications and Command Units are designed to handle large, multi-disciplinary, multi-jurisdictional events. Each unit is staffed with several team members. Team members represent multiple agencies and possess communications, electronics

and computer operations experience and have been trained to use the sophisticated computer and communications equipment on the units.

There are also two communications Site on Wheels (SOW) assets in Oklahoma available for response during state and local public safety events. These assets have the ability to establish communications during public safety incidents if infrastructure is damaged or does not exist.[37]

5.4 Training and Exercise

The Statewide Interoperable Communications Planning Division coordinates regularly with the Training and Exercise Division within OKOHS to ensure that communications components are incorporated into the Oklahoma Training and Exercise Program. Incorporating these components into regularly scheduled exercises tests different levels of communications and displays the ability to communicate among multiple agencies, multiple disciplines and multiple jurisdictions. It also integrates federal, state, local, tribal and NGOs in order to promote interoperability across agencies and jurisdictions within the state creating regular comprehensive training and exercise. National Incident Management System (NIMS) training and certification is required of all emergency responders in Oklahoma.

5.4.1 2011 Exercises

Communications components and objectives were incorporated into planned exercises in 2011. In April 2011, a full-scale exercise was conducted involving multiple agencies and jurisdictions during an active shooter scenario in Midwest City. This exercise tested communications capabilities at the local level. The next exercise, Septemberfest, was a preplanned event that tested communications at the state-level, specifically focusing on the functions of the COML for the Oklahoma RRS. The incorporation of additional communications components into regularly scheduled exercises will remain a high priority for the state of Oklahoma throughout 2012.

5.4.2 Oklahoma Communications Unit Program

OKOHS, in conjunction with the SIGB, is currently in the process of enhancing a Communications Unit Program for the state of Oklahoma. This program is intended to build Oklahoma's cadre of Certified State of Oklahoma COML /COMT personnel through training and credentialing.

[37] See Appendix F for additional information regarding the Communications Resources for Statewide Deployment.

COML/COMT Training

A top priority for the Oklahoma Communications Unit Program is the training of COML/COMT personnel. In 2010, an All-Hazards Type III COML Course and an All-Hazards Type III COML Train-the-Trainer Course were held via TA workshop provided by OEC/ICTAP. A limited number of Certified State of Oklahoma COMLs received their COML Instructor Certification in 2011, providing them with the ability to train others in the state. In December 2011, an All-Hazards COML Course was provided, and it was the first course taught entirely by Oklahoma instructors.

In October 2011, the state's first All-Hazards COMT Course was held in Oklahoma City via Technical Assistance. Multiple jurisdictions and disciplines were represented. OKOHS plans to incorporate additional COML/COMT training courses into the OKOHS Training and Exercise Program—further expanding the Oklahoma Communications Unit Program.

COML Committee

The COML Committee was formed in 2010 as a working group under the guidance of the Training and Exercise Committee of the SIGB to make recommendations to the SIGB and to OKOHS regarding the Oklahoma Communications Unit Program. The COML Committee is a key component of the Oklahoma Communications Unit Program. Specific duties of the COML Committee include:

- Recommending future candidates for COML/COMT training.
- Determining additional training and qualifications necessary to serve as a COML/COMT at large-scale incidents.
- Recommending credentialing at the state level.
- Creating a cadre of instructors capable of delivering COML/COMT training in Oklahoma.
- Assisting the Oklahoma Homeland Security Regions with interoperable communications guidelines and policies.
- Serving as a resource for agencies with questions regarding interoperable communications.

The COML Credentialing Subcommittee (CCSC) was created specifically to review COML/COMT Position Task Books before an individual can receive recognition as a Certified State of Oklahoma COML/COMT. The CCSC consists of seven members from across the state to ensure that multiple regions are represented. The subcommittee has also developed a procedures document for public safety communications personnel who seek recognition as a Certified State of Oklahoma COML/COMT.

Certified State of Oklahoma COML/COMT Recognition Procedure

Individuals seeking recognition as a Certified State of Oklahoma COML/COMT are encouraged to review the Certified State of Oklahoma COML/COMT Recognition Procedure document, which will become available in 2012. This document will list the prerequisites, training and the Position Task Book completion process required for consideration by the CCSC. Position Task Books are reviewed by the

CCSC which then makes a recommendation to OKOHS that the candidate be approved. OKOHS maintains the records for the Oklahoma Communications Unit Program.

5.5 Usage

Achieving daily use of interoperable communications equipment throughout the region (optimal level on the SAFECOM Interoperability Continuum) is incorporated into Goal 6 within the Oklahoma SCIP. Accomplishing this goal will require the proper technology, the implementation of SOPs across multiple jurisdictions and agencies and regular training and exercises with interoperable communications components. The vast majority of the state, depending on the jurisdiction, agency or region, is operating mid-level on the SAFECOM Interoperability Continuum with usage levels falling between localized emergency incidents and regional incident management. Within the OKWIN footprint, responders are able to have daily use throughout the area, if they have compatible radios. Additional 700/800 MHz radios are needed within the footprint to achieve daily use from all responders. Currently, usage can only be achieved by moving in mobile gateway technology when an incident is located outside of the OKWIN footprint.

5.5.1 Communications Assets and Mapping (CASM) Tool

In 2009, the contractor, L.R. Kimball, conducted a local capabilities assessment for the state of Oklahoma. On behalf of OKOHS and the state, L.R. Kimball entered data into the CASM tool for public safety officials to access information regarding communications systems and capabilities across the state. On July 14, 2011, Oklahoma provided a CASM Workshop via OEC/ICTAP to reintroduce the tool to key stakeholders. Public safety officials who are registered with CASM may access the tool at any time to manipulate the data to determine how existing assets can be optimally used.[38]

5.6 Funding

The lack of adequate funding for interoperable communications has been a long-term problem for the Oklahoma communities which have traditionally focused on building independent communications systems—often on a limited budget. Historically, there has been a lack of planning and coordination of communication needs for first responders, resulting in an ineffective use of limited financial resources.

Committed sources of funding are being applied to the projects described in this SCIP from the following sources:

[38] To view the information in CASM, contact the SCIP Primary POC.

- Homeland Security Grant Program (HSGP)
- State of Oklahoma Appropriations
- Interoperable Emergency Communications Grant Program (IECGP)
- Public Safety Interoperable Communications (PSIC) Grant Program
- American Recovery and Reinvestment Act Funds
- Federal Appropriations
- Local Funds

Multiple state agencies in Oklahoma have partnered to develop a comprehensive funding strategy for state-owned infrastructure as part of the Oklahoma Sustainment Plan. This funding strategy will identify funding sources and prioritize current and future projects. It will also examine the Interoperable Communications Capabilities Assessment in order to eliminate duplications of state infrastructure and allocate funds more effectively. The strategy will be reviewed by the Oklahoma Legislature in 2012.

Long-term funding will have to come from a variety of sources—given that (a) the PSIC grant is a onetime event; (b) homeland security funding to Oklahoma has decreased dramatically in recent years; and (c) the current economy is not conducive to Oklahoma's need for additional interoperable communications funding. Funding remains the biggest challenge for interoperable communications in the state of Oklahoma.

6 Closing

The SCIP is intended to provide a reference point and operational road map for policy makers and public safety practitioners in the state of Oklahoma regarding plans to improve interoperable communications across the state. The goals and objectives identified in this document reflect the SAFECOM Interoperability Continuum while remaining relevant to Oklahoma's specific needs.

Improving interoperable communications in the state of Oklahoma requires attention to more than just technology. Success requires participation from the local, regional, tribal, state, federal and NGO response communities in order to achieve effective governance, statewide SOPs, consistent usage of technology and a comprehensive training and exercise program.

In order to remain current on interoperability planning efforts and ensure that issues at the local, regional, state, tribal and NGO levels are addressed, stakeholders at all levels of government are encouraged to:

- Maintain regular contact with SIGB members to voice local interoperable communications issues.
- Formally request OKFOGs for the first responders in their agencies.
- Regularly visit the Interoperable Communications Website for news, funding opportunities and training offerings.
- Request to be added to the *Oklahoma Interoperability Newsletter* distribution list.

With the oversight of OKOHS and recommendations from the SIGB, the SCIP will remain a living document and will be updated annually. Through the mutual cooperation from all stakeholders, Oklahoma will maintain its commitment to improving public safety interoperable communications, which will enable more effective protection of the lives and property of its citizens.

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Appendix A Executive Order 2007-42

Brad Henry
Governor

FILED
OCT 16 2007
OKLAHOMA SECRETARY OF STATE

EXECUTIVE DEPARTMENT

EXECUTIVE ORDER 2007-42

I, Brad Henry, Governor of the State of Oklahoma, pursuant to the authority vested in me by Sections 1 and 2 of Article VI of the Oklahoma Constitution and the Oklahoma Homeland Security Act, 74 O.S. §§ 51, *et seq.*, hereby direct and order as follows:

The lack of adequate interoperable communications for first responders at all levels has been a problem for many years. Significant advances have been made in interoperable communications over the past five years. Under my authority, the Oklahoma Office of Homeland Security (OKOHS) has made a number of investments in improving interoperable communications through funding from the United States Department of Homeland Security. To date over $32 million in federal funds have been dedicated to increasing interoperable communications.

OKOHS is directed to continue their efforts to improve interoperable communications in the state of Oklahoma. The Oklahoma Homeland Security Director and OKOHS shall continue to oversee the implementation of any and all initiatives or efforts mandated by the United States Department of Homeland Security and its subdivisions. OKOHS shall remain the State Administering Agency for all federal funds related to homeland security, including the Public Safety Interoperable Communications grant program. OKOHS is further directed to oversee the development and implementation of a Statewide Interoperable Communications Plan pursuant to federal requirements.

Recognizing the need for a state level strategy for communications, the Oklahoma Legislature appropriated funding to the Department of Public Safety for a study of state level communications capabilities and needs. OKOHS, in consultation with the Oklahoma Department of Public Safety, is directed to develop and oversee the state study. All state agencies, boards and commissions are directed to cooperate with the OKOHS in the study and development of state interoperable communications

0 4 2 4 5 2

This Executive Order shall be distributed to all Cabinet and the Oklahoma Homeland Security Director for immediate implementation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Oklahoma to be affixed at Oklahoma City, Oklahoma, this 16th day of October, 2007.

BY THE GOVERNOR OF THE STATE OF OKLAHOMA

BRAD HENRY

ATTEST:

SECRETARY OF STATE Acting Assistant

Appendix B Senate Bill 1153

An Act

ENROLLED SENATE
BILL NO. 1153

By: Barrington of the Senate

and

Terrill, Roan and Tibbs of the House

An Act relating to communications; specifying the duties of the Oklahoma Office of Homeland Security regarding certain communications within the state; providing intent of the Legislature regarding certain communication systems; prohibiting use of state funds under certain circumstances; amending 62 O.S. 2001, Sections 41.5i, as last amended by Section 5, Chapter 266, O.S.L. 2006 and 41.5j, as amended by Section 6, Chapter 266, O.S.L. 2006 (62 O.S. Supp. 2008, Sections 41.5i and 41.5j), which relate to the Information Services Division of the Office of State Finance; modifying certain powers and duties; modifying certain exception; prohibiting the use of state funds by state agencies under certain circumstances; providing method for acquiring, developing, or enhancing certain communication systems; authorizing certain proposal; providing for codification; and providing an effective date.

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 51.1a of Title 74, unless there is created a duplication in numbering, reads as follows:

A. In addition to the powers and duties as defined elsewhere in statute, the Oklahoma Office of Homeland Security has the duty and responsibility for interoperable public safety communications planning within the State of Oklahoma. As part of this duty the Oklahoma Office of Homeland Security shall:

1. Annually develop and report to the Governor, President Pro Tempore of the Senate and Speaker of the House of Representatives, the Statewide Communications Interoperability Plan;

2. Coordinate statewide planning for public safety communication needs of state government and state emergency responders, including a migration plan for state agency use of public safety communications technologies and rendering of aid between state government and its political subdivisions for organizing and use of disparate public safety communications systems;

3. Serve as a focal point for all state-level projects involving public safety communications vendors where the focus of such authority can substantially enhance the state communications plan or savings;

4. Apply for, receive, and hold, or assist state agencies in applying for, receiving, or holding such authorizations, licenses, and allocations of channels and frequencies to carry out the purposes of this section;

5. Establish minimum standards and protocols for acquisition, development, or enhancement of public safety communications technologies. These standards shall be utilized by the Information Services Division of the Office of State Finance pursuant to the provisions of Section 41.5i of Title 62 of the Oklahoma Statutes; and

6. Accomplish such other purposes as may be necessary or incidental to the administration of its authority or functions pursuant to law.

B. It is the intent of the Legislature that all state public entities comply with the provisions of the Statewide Communications Interoperability Plan issued by the Oklahoma Office of Homeland

ENR. S. B. NO. 1153 Page 2

Security. All state agencies are required to review the provisions of the Statewide Communications Interoperability Plan and the public safety communications standards issued by the Oklahoma Office of Homeland Security prior to the purchase, acquisition, development, or enhancement of any public safety communications system. Local public safety agencies and political subdivisions of the state are encouraged, but not required, to review the provisions of the Statewide Communications Interoperability Plan and the public safety communications standards issued by the Oklahoma Office of Homeland Security prior to the purchase, acquisition, development, or enhancement of any public safety communications system to assist the local public safety agency or political subdivision in purchasing decisions.

C. No state agency shall use state funds or enter into any agreement for the acquisition, development, or enhancement of a public safety communication system unless the request is consistent with the Statewide Communications Interoperability Plan and the public safety communications standards issued by the Oklahoma Office of Homeland Security.

SECTION 2. AMENDATORY 62 O.S. 2001, Section 41.5i, as last amended by Section 5, Chapter 266, O.S.L. 2006 (62 O.S. Supp. 2008, Section 41.5i), is amended to read as follows:

Section 41.5i In addition to the powers and duties as defined elsewhere in this title, the Information Services Division of the Office of State Finance shall:

1. Coordinate statewide planning for communication and telecommunications needs of state government, including, but not limited to, voice, data, radio, video, Internet, eGovernment, as referenced in Sections 41.5p and 41.5q of this title, and facsimile transmissions through analysis of the telecommunications and information technology plan of each agency;

2. ~~Establish~~ In coordination with the Oklahoma Office of Homeland Security, establish minimum mandatory standards and protocols for:

a. communication networks and equipment,

ENR. S. B. NO. 1153 Page 3

b. wide area and local area systems,

c. integration of equipment, systems and joint usage,

d. Internet and eGovernment,

e. operating systems or methods to be used to meet communications requirements efficiently, effectively, and securely,

f. rendering of aid between state government and its political subdivisions with respect to organizing of communications systems, and

g. an economical and cost-effective utilization of communication services.

The standards and protocols shall be compatible with the standards and protocols established for the Oklahoma Government Telecommunications Network created in Section 41.5m of this title;

3. Serve as a focal point for all statewide projects involving current communications vendors where the focus of such authority can substantially enhance the state communications plan or the savings which can be achieved thereunder;

4. Provide, when requested by political subdivisions of the state, for the organizing of communications or telecommunications systems and service between the state and its political subdivisions and enter into agreements to effect the purposes of this section;

5. Cooperate with any federal, state or local emergency management agency in providing for emergency communications and telecommunication services;

6. Apply for, receive, and hold, or assist agencies in applying for, receiving or holding such authorizations, licenses and allocations of channels and frequencies to carry out the purposes of this section;

ENR. S. B. NO. 1153 Page 4

7. Accomplish such other purposes as may be necessary or incidental to the administration of its authority or functions pursuant to law; and

8. Provide support for telecommunication networks of state agencies through analysis of the telecommunications needs and requirements of each agency and promotion of the use of the Oklahoma Government Telecommunications Network created in Section 41.5m of this title.

SECTION 3. AMENDATORY 62 O.S. 2001, Section 41.5j, as amended by Section 6, Chapter 266, O.S.L. 2006 (62 O.S. Supp. 2008, Section 41.5j), is amended to read as follows:

Section 41.5j A. No agency of the executive branch of the state shall use state funds for or enter into any agreement for the acquisition, development or enhancement of a communication or telecommunication system including voice, data, radio, video, Internet, eGovernment, as referenced in Sections 41.5p and 41.5q of this title, and facsimile systems, without written authorization of the Director of State Finance. The Director of State Finance shall verify that any acquisition, development or enhancement is compatible with the operation of the Oklahoma Government Telecommunications Network created in Section 41.5m of this title.

B. No agency of the executive branch of the state shall enter into any agreement for the acquisition, development or enhancement of a communication or telecommunication system or service including voice, data, radio, video, Internet, eGovernment, and facsimile systems, unless the cost of such addition, change, improvement or development has been included in the statewide communications plan of the Information Services Division, as said plan may have been amended or revised.

C. State agencies may enter into interagency contracts to share communications and telecommunications resources for mutually beneficial purposes. The contract shall clearly state how its purpose contributes to the development or enhancement or cost reduction of a state network which includes voice, data, radio, video, Internet, eGovernment, or facsimile systems. The contract shall be approved by the Information Services Division before any payments are made.

ENR. S. B. NO. 1153 Page 5

D. The provisions of subsections A, B and C of this section shall not apply to the telecommunications network known as OneNet whether said network is governed or operated by the Oklahoma State Regents for Higher Education or any other state entity assigned responsibility for OneNet.

E. No state agency shall use state funds or enter into any agreement for the acquisition, development or enhancement of a public safety communication system unless the request is consistent with the Statewide Communications Interoperability Plan and the public safety communications standards issued by the Oklahoma Office of Homeland Security. Agencies interested in acquiring, developing or enhancing a public safety communications system shall submit a proposal to the Oklahoma Office of Homeland Security. The Oklahoma Office of Homeland Security shall issue a proposal review which summarizes whether the proposal is consistent with the Statewide Communications Interoperability Plan and the technology standards issued. The proposal review shall be submitted to the requesting agency and to the Director of State Finance.

SECTION 4. This act shall become effective November 1, 2009.

Passed the Senate the 12th day of May, 2009.

Presiding Officer of the Senate

Passed the House of Representatives the 16th day of April, 2009.

Presiding Officer of the House of Representatives

ENR. S. B. NO. 1153 Page 6

OFFICE OF THE GOVERNOR

Received by the Governor this 13th

day of May, 2009,

at 1:34 o'clock P M.

By:

Approved by the Governor of the State of Oklahoma the 19th day of

May, 2009, at 11:49 o'clock P M.

Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Secretary of State this

19th day of May, 2009,

at 1:11 o'clock P M.

By:

ENR. S. B. NO. 1153 Page 7

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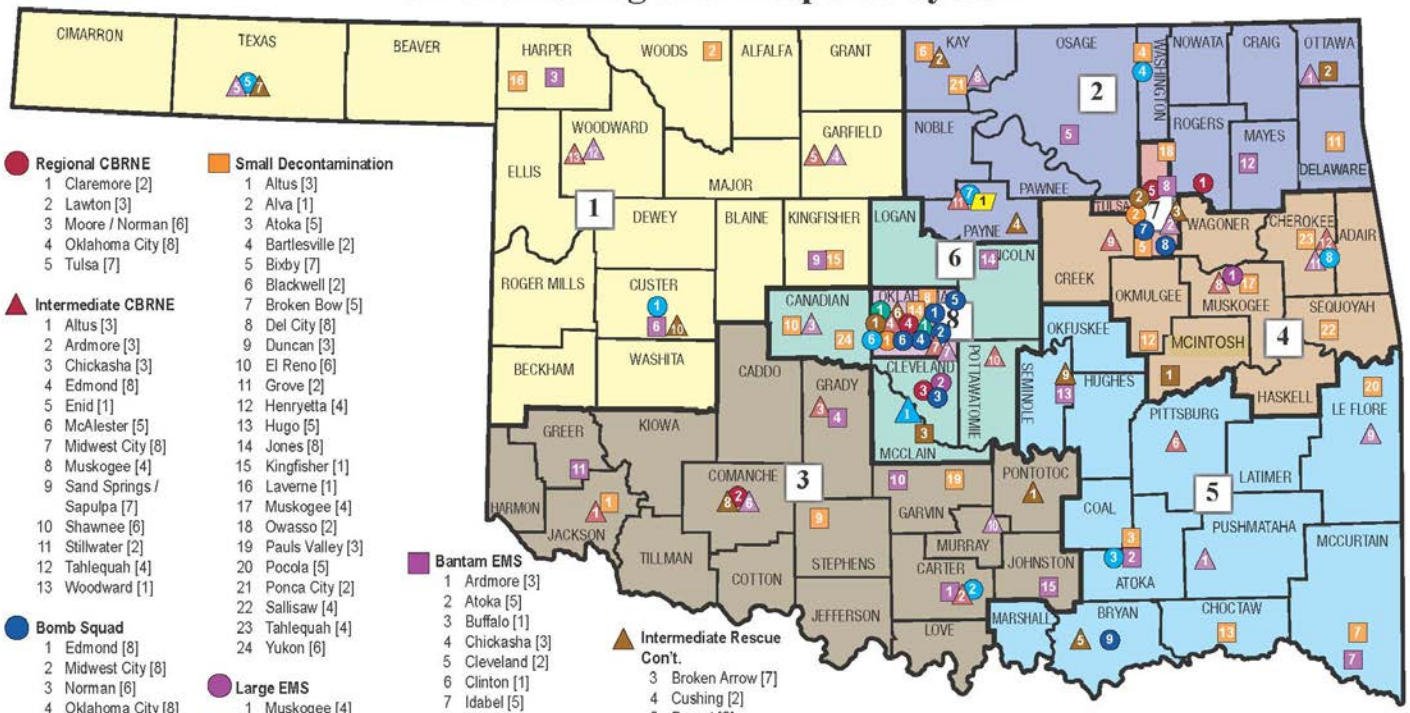
Appendix C Oklahoma Regional Response System Area Map

Oklahoma Regional Response System



Regional CBRNE
1 Claremore [2]
2 Lawton [3]
3 Moore / Norman [6]
4 Oklahoma City [8]
5 Tulsa [7]

Intermediate CBRNE
1 Altus [3]
2 Ardmore [3]
3 Chickasha [3]
4 Edmond [8]
5 Enid [1]
6 McAlester [5]
7 Midwest City [8]
8 Muskogee [4]
9 Sand Springs / Sapulpa [7]
10 Shawnee [6]
11 Stillwater [2]
12 Tahlequah [4]
13 Woodward [1]

Bomb Squad
1 Edmond [8]
2 Midwest City [8]
3 Norman [6]
4 Oklahoma City [8]
5 Oklahoma County [8]
6 Oklahoma Highway Patrol [8]
7 Tulsa [7]
8 Oklahoma Highway Patrol [7]
9 Oklahoma Highway Patrol [5]

Mass Decontamination
1 Oklahoma City [8]
2 Tulsa [7]

Small Decontamination
1 Altus [3]
2 Alva [1]
3 Atoka [5]
4 Bartlesville [2]
5 Bixby [7]
6 Blackwell [2]
7 Broken Bow [5]
8 Del City [8]
9 Duncan [3]
10 El Reno [6]
11 Grove [2]
12 Henryetta [4]
13 Hugo [5]
14 Jones [8]
15 Kingfisher [1]
16 Laverne [1]
17 Muskogee [4]
18 Owasso [2]
19 Pauls Valley [3]
20 Pocola [5]
21 Ponca City [2]
22 Sallisaw [4]
23 Tahlequah [4]
24 Yukon [6]

Large EMS
1 Muskogee [4]
2 Norman [6]

Medium EMS
1 Afton [2]
2 Antlers [5]
3 El Reno [6]
4 Enid [1]
5 Guymon [1]
6 Lawton [3]
7 Midwest City [8]
8 Ponca City [2]
9 Poteau [5]
10 Sulphur [3]
11 Tahlequah [4]
12 Woodward [1]

Bantam EMS
1 Ardmore [3]
2 Atoka [5]
3 Buffalo [1]
4 Chickasha [3]
5 Cleveland [2]
6 Clinton [1]
7 Idabel [5]
8 Jenks [7]
9 Kingfisher [1]
10 Lindsay [3]
11 Mangum [3]
12 Pryor [2]
13 Seminole [5]
14 Stroud [6]
15 Tishomingo [3]

Urban Search & Rescue
1 Oklahoma City [8]
2 Tulsa [7]

Intermediate Rescue
1 Ada [3]
2 Blackwell [2]

Intermediate Rescue Con't.
3 Broken Arrow [7]
4 Cushing [2]
5 Durant [5]
6 Edmond [8]
7 Guymon [1]
8 Lawton [3]
9 Seminole [5]
10 Weatherford [1]

Small Rescue
1 Eufaula [4]
2 Miami [2]
3 Purcell [6]

Command One
1 Oklahoma City [8]

Command Two
1 Oklahoma City [8]

RRS Logistics
1 Stillwater [2]

Agriculture Response
1 Arapaho [1]
2 Ardmore [3]
3 Atoka [5]
4 Bartlesville [2]
5 Guymon [1]
6 Oklahoma City [8]
7 Stillwater [2]
8 Tahlequah [4]

Mobile Laboratory
1 Goldsby [6]

Oklahoma Regional Response System

OKLAHOMA OFFICE OF HOMELAND SECURITY

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Appendix D Statewide Interoperability Governing Body Charter

STATEWIDE INTEROPERABILITY GOVERNING BODY

CHARTER

January 2010

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Section 1: INTRODUCTION

The Statewide Interoperability Governing Body (SIGB) is committed to cooperatively addressing the challenge of communications interoperability. This document describes the purpose, authority, outcomes, scope, operating principles, membership and management by which the Statewide Interoperability Governing Body (SIGB) will achieve success.

Section 2: PURPOSE

This board exists to address the challenges facing interdisciplinary communications across multiple jurisdictions. It was established to create a centralized interoperable communications planning and implementation capacity for Oklahoma. The board's goals are encompassed in the Vision and Mission defined in the Statewide Communications Interoperability Plan (SCIP):

Vision

- All public safety entities in the state of Oklahoma will possess the knowledge, resources and technology to seamlessly communicate as authorized through voice and data, on demand and in real-time, during day-to-day operations and public safety events. This operating environment would ensure the effectiveness of response capabilities to mitigate potential damage to life and property that could occur from the inability to properly communicate.

Mission

- To support the highest level of communications interoperability for all public safety entities throughout the state of Oklahoma by fostering an effective organizational structure to oversee that proper planning, training and resources are provided to responders at all levels.

It is necessary for public safety organizations to communicate or share critical voice or data information with other jurisdictions in day-to-day operations, natural disasters, emergency response scenarios and terrorist incidents. Failure to accomplish the mission in each situation can result in the loss of lives and property.

This board exists to establish a partnership among local, county, tribal, state, federal and non-governmental organizations (NGO) in order to enhance communications interoperability capabilities.

This board provides a forum for each public safety entity to discuss related public safety communications initiatives that may or may not impact the work of this board. This helps ensure individual projects have an opportunity to align with the Statewide Communications Interoperability Plan (SCIP).

Section 3: AUTHORITY

A. This board has been tasked with evaluating the state of both current and emerging communications interoperability in the state of Oklahoma, creating a plan for statewide communications interoperability, overseeing implementation of the plan and developing appropriate policies, procedures and guidelines.

B. All policies, plans and projects will be submitted to and approved by the Oklahoma Office of Homeland Security (OKOHS) as the State Administering Agency (SAA).

C. Pursuant to Executive Order 2007-42, the Director of the Oklahoma Office of Homeland Security selected the initial membership for this group based on recommendations from local, county, state, tribal, federal and non-governmental organizations (NGO). Although the individuals may come from one particular discipline within a jurisdiction or region, they will represent the overall interests of all disciplines in the jurisdiction or region while serving on the board.

Section 4: OUTCOMES

The desired outcomes that the board will accomplish are listed below:

A. Conduct an assessment to better understand the current baseline of communications interoperability in the state of Oklahoma.

B. Develop a working group to identify and recommend future technologies that will enhance the communications interoperability capability in the state of Oklahoma.

C. This board will work to identify sources of funding allotted through cross-discipline and cross-jurisdictional coordination.

D. Recommend a Statewide Communications Interoperability Strategy.

E. Coordinate implementation of the Statewide Communications Interoperability Plan (SCIP).

F. Recommend statewide Standard Operating Procedures (SOPs) based on the results of the Kimball Consulting Local Asset Inventory and other assessments that may be conducted.

G. Implement After Action Reports across the state of Oklahoma to incorporate best practices.

H. Recommend statewide best practices, policies, procedures and protocols for communications interoperability and incorporate them into existing regional interoperability agreements.

I. Recommend the training of key communications personnel—especially dispatchers and dispatch center supervisors as well as technical communications support staff.

J. Coordinate training and exercise opportunities around communications interoperability and ensure they are available to all necessary and authorized public safety practitioners.

Section 5: SCOPE

A. Inclusion

The board will initially focus on first response entities and associated support groups and incorporate additional disciplines in future phases.

B. Function

This board will address the technological and operational components of communications interoperability. Technical means equipment standards and maintenance. Operational means authorization, standard operating procedures, Incident Command and training and exercises.

C. Communications Type

This board will focus on voice communications interoperability in the short term, with the expectation that data will be addressed in the foreseeable future.

D. Usage

This board has identified four distinct levels of interoperability to address:

- Day-to-Day—Routine within a jurisdiction (interdisciplinary)
- Day-to-Day—Routine inter-jurisdictional (mutual aid)
- Unplanned Critical Incident (interdisciplinary/inter-jurisdictional)
- Planned Event (interdisciplinary/inter-jurisdictional)

Section 6: OPERATING PRINCIPLES

A. Consider each jurisdiction's or region's unique needs—recognize and respect them, and attempt to address them if they negatively impact regional and statewide communications interoperability capabilities.

B. Think interdisciplinary.

C. Use a phased approach. Do not attempt to solve all problems at once.

D. Ensure all strategic initiatives fit within the desired future goals and strategy.

E. Identify matters within the board's control, and apply resources toward those matters rather than areas that are not within the board's control.

F. Coordinate a statewide strategy with the other statewide interoperability strategies.

G. Strive to achieve a balance between infrastructure and subscriber unit needs.

H. Distribute the responsibility of managing communications interoperability so that it does not rest on any one individual, agency or technology.

I. Ensure the state of Oklahoma takes on a collaborative approach in dealing with the issue.

J. Stay aligned with other statewide systems.

K. Avoid acronyms and codes to eliminate confusion or misunderstanding.

L. Speak with one voice when reporting externally. Follow the newsletter and meeting minutes.

M. Do not lose the sense of urgency that the Oklahoma City bombing (Alfred P. Murrah Federal Building bombing), natural disasters and the September 11th terrorist attacks brought to this issue.

N. Keep the issue of communications interoperability in front of policy makers as they are elected and administrations change.

O. Though both voice and data interoperability are within the scope of the board, work toward achieving voice interoperability solutions across disparate systems in the short term (2-3 years out).

P. Consider security concerns during the planning of future communications solutions.

Section 7: MEMBERSHIP

A. The following disciplines will represent this board as voting members:

- Law Enforcement*
- Fire Service (including volunteer fire service)*
- Emergency Medical Service (EMS)
- Emergency Management*
- State of Oklahoma
- Federal Agency
- Oklahoma Wireless Information Network (OKWIN) Project Manager
- Oklahoma Wireless Information Network (OKWIN) Owner*
- Harris (M/A-Com) Owner
- Federally Recognized Tribe**
- Department of Health
- Military
- OKOHS Region 1
- OKOHS Region 2
- OKOHS Region 3
- OKOHS Region 4
- OKOHS Region 5
- Central Oklahoma Urban Area Security Initiative (COUASI)
- Tulsa Urban Area Security Initiative
- Oklahoma Department of Transportation (ODOT)

*Both state and local jurisdictions will represent these disciplines. (Law enforcement will include a representative from the county level in addition to local and state representatives.)
**Tribal representation will include more than one discipline.

B. The following disciplines will represent this board as non-voting members:
    - Statewide IOC Planning Coordinator
    - Non-governmental organization (NGO)
    - Utilities

C. To the extent possible, the following jurisdictional levels will be reflected on this board:
    - Local
    - County
    - Tribal
    - State
    - Federal
    - Non-governmental organization (NGO)

D. Voting members are to be responsible for representing their jurisdiction or region. If a voting member is unable to attend a board meeting, a named alternate voting member from that

7

jurisdiction or region may be appointed for that meeting. The voting member must notify the Oklahoma Office of Homeland Security (OKOHS) prior to the meeting that an alternate has been designated to represent him/her at the meeting, and an official letter designating the alternate must also be on file with the Oklahoma Office of Homeland Security (OKOHS). Without such prior notification, the alternate will not count when determining if a quorum has been established or be allowed to participate in votes during the meeting.

E. After two consecutive absences, the jurisdiction or region of the represented board member will be notified by the Oklahoma Office of Homeland Security (OKOHS) on behalf of the Statewide Interoperability Governing Body (SIGB) to recommend another representative to be appointed by the Oklahoma Office of Homeland Security (OKOHS) Director.

F. Attendance via teleconference will be permitted.

G. Advisory members are part of the board by virtue of their position and ensure that all disciplines are represented on the board. These members are required to attend all board meetings and provide feedback to the voting members for decision-making purposes. However, they will not vote. Additionally, a number of regional and state agencies provide advisory members to represent the views of their organization and provide coordination for implementing aspects of the Statewide Communications Interoperability Plan (SCIP).

H. The board may add ad hoc members as necessary. These members may come from local (including surrounding jurisdictions), regional, state, tribal or Federal public safety agencies or planning organizations. They may sit on the board on a temporary basis as needed.

Section 8: DECISION MAKING

A. Board Decision Making Process
- Each jurisdiction or region has one vote to be cast by its voting member. If the voting member is unable to attend, the alternate voting member will cast the vote for the jurisdiction or region.
- Votes submitted electronically will be counted.
- Simple majority rules. All decisions and recommendations approved by a simple majority will be considered a decision or recommendations of the board when presented to the Oklahoma Office of Homeland Security (OKOHS) for consideration. As much as possible, the majority opinion will be reflected. Board members are free to express to their authorizing body or office how they voted/stood on the position.

- This Charter shall be adopted upon approval of fifty (50) percent plus one (1) of voting members.
- A two-thirds majority vote is required for charter amendments.

B. Decisions and recommendations of the board will be reported to the Oklahoma Office of Homeland Security (OKOHS), as the State Administering Agency (SAA).

C. This board will report status, actions and recommendations to a larger audience through following a communications plan developed in partnership with the Oklahoma Office of Homeland Security (OKOHS). This communications plan will be developed independent of this charter.

Section 9: LOGISTICS

A. Board meetings will take place the second Thursday of January, April, July, and October at 9:30 a.m. and as needed.

B. The board will meet at facilities designated by the Oklahoma Office of Homeland Security (OKOHS).

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Appendix E Minimum Standards for Communication Equipment Purchases

Minimum Standards for Communication Equipment Purchases

June 2011

Version 2.0

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Record of Version		
VERSION NUMBER	**DATE**	**DESCRIPTION**
Baseline Version 1.0	10/30/09	Baseline document
Version 1.01	11/03/09	• Inserted reference to version number of cover page • Record of Version table added • Replaced Digital Coded Squelch with Capable Continuous Tone-Coded Squelch System • Removed reference to interoperability frequencies for UHF and 800 MHz infrastructure
Version 2.0	06/02/2011	Annual IOCSS Working Group Update • Inserted Digital Coded Squelch Requirements • Reduced the 12-character display to 10-character display • Inserted the Oklahoma Common Channels programming requirement • Inserted the VHF High Band Oklahoma Common Channels (Narrowband)

1 Introduction

The lack of adequate, reliable and interoperable communications systems has been a challenge for public safety agencies in the state of Oklahoma and across the country for decades. In many cases, agencies cannot perform their mission-critical duties effectively, because they are unable to communicate vital voice or data information inter-jurisdictionally in daily operations or in emergency situations.

In the state of Oklahoma, cultural resistance to change and limited funding has held the communications capabilities of most agencies well behind the current standard and has caused systems to be developed independently of one another. In order to resolve some of these issues and create a more formalized process for communications interoperability planning, the Oklahoma Legislature passed Senate Bill 1153 (SB 1153) in early 2009.

SB 1153 is critical to communications interoperability efforts in the state of Oklahoma for several reasons. First, it names the Oklahoma Office of Homeland Security (OKOHS) as a central point of contact for all statewide communications interoperability planning. Next, SB 1153 enumerates the planning duties for OKOHS. These duties include:

1. Oversight and implementation of the Statewide Communications Interoperability Plan (SCIP);
2. Coordination of a migration plan for use of communications interoperability technologies including aid to connect disparate systems used by public safety agencies; and
3. Assistance with applying for, receiving, and holding authorization for frequencies and channels for state agencies.

Essentially, SB 1153 makes communications interoperability efforts a priority in the state of Oklahoma.

One of the most important aspects of SB 1153 is that it gives OKOHS the ability to create standards for future purchases of equipment and infrastructure made by state agencies in support of communications interoperability in Oklahoma. The goal of these standards is to eliminate redundancy and ensure the compatibility of new purchases with existing technology.

2 Methodology

The Interoperable Communications State Standards (IOCSS) Working Group was formalized in 2009 and is composed of representatives from multiple state agencies to recommend minimum standards for communication equipment purchases. It was imperative to include multiple agencies with a vested interest in communications interoperability to ensure the success of these minimum standards. The IOCSS will meet as needed to establish and modify minimum standards for communication equipment.

The standards will be implemented in the following phases:

Phase 1: Implement Subscriber Equipment Standards (Includes Mobile and Portable Radios)[1]

Phase 2: Implement Repeater Equipment Standards (Best practices)

Phase 3: Implement Infrastructure Standards (Tower Sites)

Phase 4: Implement Tactical Communications Equipment Standards (Gateways)

Phase 5: Implement Data Connectivity Standards

Additional information will be added to this document as minimum standards are defined for the forthcoming phases. It is imperative to note that this document is considered to be a living document and will be updated as new information becomes available.

3 Phase I: Subscribers

The following minimum standards for subscriber equipment have been defined for VHF (Low Band), VHF (High Band), UHF and 800 MHz radio equipment. All equipment purchases must adhere to the technical requirements defined below. At a minimum, each radio must be programmed with the applicable interoperability frequencies as defined below for each frequency band.

3.1 VHF (Low Band) Radio (33 – 50 MHz)

VHF (Low Band) equipment can only be purchased to support existing VHF (Low Band) communication systems. OKOHS strongly discourages any state agency from purchasing a new VHF (Low Band) system without justifiable cause.

All new purchases of VHF (Low Band) radio equipment must adhere to the following minimum requirements:

- Federal Communications Commission (FCC) Part 90 Type Accepted
- Capable of Continuous Tone-Coded Squelch System (CTCSS)
- Minimum of 10 character alpha numeric display
- Minimum of 60 watts power for all mobile radio equipment
- Minimum of 4 watts for all portable radio equipment
- Minimum of 32 channels
- Compliant with Mil Spec 810 C, 810 D and 810 E
- Programmed with the Non-Federal VHF low band National Interoperability Frequencies as defined in the VHF low band tables listed below

All radios purchased must be programmed with the National Interoperability Channels as defined by National Public Safety Telecommunications Council's (NPSTC) Channel Naming Report dated June 13,

[1] Phase 1 is currently available at www.ioc.ok.gov.

2007. Until licensed by the FCC, these frequencies can only be used for the immediate protection of life or property; radio users may use prudent measures beyond the specifics of their license.

3.1.1 Simplex VHF (Low Band) Interoperability Channels

Simplex VHF (Low Band) Interoperability Channels for Subscriber Equipment			
Description	NPSTC ID	Channel (MHz)	CTCSS Tone ±
Law Enforcement	LLAW1	39.4600	CSQ*/156.7
Fire (Proposed)	LFIRE2	39.4800	
Law Enforcement	LLAW3	45.8600	
Fire	LFIRE4	45.8800	

±Default operation should be carrier squelch receive, Continuous Tone Coded Squelch System (CTCSS) transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
*Carrier Squelch (CSQ); No sub-audible tone on either the receiver or transmitter.

3.2 VHF (High Band) Radio (150 – 162 MHz)

All new purchases of VHF (High Band) radio equipment must adhere to the following minimum requirements:

- FCC Part 90 Type Accepted
- Capable of Continuous Tone-Coded Squelch System (CTCSS)
- Capable of Digital-Coded Squelch (DCS)
- Narrowband-compliant according to FCC emissions 11K2F3E
- Wideband-compliant according to FCC emissions 20K0F3E
- Minimum of 10 character alpha numeric display
- Minimum of 120 channels
- Minimum of 25 watts power for all mobile radio equipment (A minimum of 40 watts is recommended.)
- Minimum of 4 watts for all portable radio equipment
- Compliant with Mil Spec 810 C, 810 D and 810 E
- Programmed with the Non-Federal VHF High Band National Interoperability Frequencies as defined in the VHF High Band tables listed below
- Programmed with the Oklahoma VHF Common Channels as defined in the VHF High Band tables listed below

All new VHF (High Band) radio equipment must be programmed with the National Interoperability Channels as defined by NPSTC's Channel Naming Report dated June 13, 2007. The IOCSS strongly recommends that all new VHF (High Band) must be programmed with the local mutual aid channels for police, fire and EMS. Any use as a base station, repeater or control station will require an FCC radio license; however, the VHF (High Band) National Interoperability Channels are covered by a "blanket authorization" from the FCC for mobile operation. Mobile operation is an FCC reference to a radio frequency that is only to be used in a mobile or portable radio.

3.2.1 Simplex VHF (High Band) Interoperability Channels

Simplex VHF (High Band) Interoperability Channels for Subscriber Equipment*				
Description	**Authorized Use**	**NPSTC ID**	**Channel (MHz)**	**CTCSS**
Calling	base/mobile	VCALL10	155.7525	CSQ /156.7 (5A)
Tactical	base/mobile	VTAC11	151.1375	CSQ /156.7 (5A)
Tactical	base/mobile	VTAC12	154.4525	CSQ /156.7 (5A)
Tactical	base/mobile	VTAC13	158.7375	CSQ /156.7 (5A)
Tactical	base/mobile	VTAC14	159.4725	CSQ /156.7 (5A)
Description	**Authorized Use**	**Wideband Channel ID**	**Channel (MHz)**	**CTCSS**
Law Enforcement	base/mobile	STATE LAW	155.4900±	
Fire	base/mobile	STATE FIRE	154.1300±	
Public Safety	base/mobile	STATE NET	155.6700±	
EMS	base/mobile	HEARS	155.3400±	
Local Government	base/mobile	OK LG MA	155.7600±	
Description	**Authorized Use**	**Narrowband Channel ID**	**Channel (MHz)**	**CTCSS**
Law Enforcement	base/mobile	OKLAW1	155.4900	CSQ /156.7
Fire	base/mobile	OKFIRE1	154.1300	CSQ /156.7
Public Safety	base/mobile	OKNET1	155.6700	CSQ /156.7
EMS	base/mobile	VMED28	155.3400	CSQ /156.7
Local Government	base/mobile	OKLGMA1	155.7600	CSQ /156.7

* To date, the state of Oklahoma has not licensed "State Law," "State Fire," "State Net," "HEARS" and "OK LG MA" mutual aid frequencies statewide for all state agencies; however, all radios purchased must be programmed with the statewide frequencies listed above. Until licensed by the FCC, these frequencies can only be used for the immediate protection of life or property; radio users may use prudent measures beyond the specifics of their license.

±These frequencies must use a 12.5 kHz bandwidth by January 1, 2013. If capacity permits, it is recommended these frequencies be programmed as both wideband and narrowband in radios. If capacity is limited, these frequencies should be programmed as wideband and reprogrammed for narrowband emission as part of a communications plan to transition local frequencies to narrowband.

3.3 Minimum Requirements for UHF Radio Equipment (450 – 470 MHz)

All new purchases of UHF radio equipment must adhere to the following minimum requirements:

- FCC Part 90 Type Accepted
- Capable of Continuous Tone-Coded Squelch System (CTCSS)
- Capable of Digital Coded Squelch (DCS)
- Narrowband-compliant according to FCC emission 11K2F3E
- Wideband-compliant according to FCC emission 20K0F3E
- Minimum of 10 character alpha numeric display
- Minimum of 120 channels

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- Minimum of 25 watts power for all mobile radio equipment (A minimum of 40 watts is recommended.)
- Minimum of 4 watts for all portable radio equipment
- Compliant with Mil Spec 810 C, 810 D and 810 E
- Programmed with the Non-Federal UHF National Interoperability Frequencies as defined in the UHF tables listed below

All new UHF radio equipment must be programmed with the National Interoperability Channels as defined by NPSTC's Channel Naming Report dated June 13, 2007. Any use as a base station, repeater or control station will require an FCC radio license; however, the UHF National Interoperability Channels are covered by a "blanket authorization" from the FCC for mobile operation. Mobile operation is an FCC reference to a radio frequency that is only to be used in a mobile or portable radio. All of the frequencies listed in the tables below are narrowband (11K2F3E) only. Usage of any UHF channel in the simplex mode as base stations is preferred over their usage as repeater stations to minimize interference.

3.3.1 Repeated UHF Interoperability Channels

Repeated UHF Interoperability Channels for Subscriber Equipment						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	UCALL40	156.7 Hz	458.2125	Mobile Output	453.2125	Mobile Input
Tactical	UTAC41	156.7 Hz	458.4625	Mobile Output	453.4625	Mobile Input
Tactical	UTAC42	156.7 Hz	458.7125	Mobile Output	453.7125	Mobile Input
Tactical	UTAC43	156.7 Hz	458.8625	Mobile Output	453.8625	Mobile Input

* Default operation should be carrier squelch receive, CTCSS 156.7 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.

3.3.2 Simplex UHF Interoperability Channels

Simplex UHF Interoperability Channels for Subscriber Equipment						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	UCALL40D	156.7 Hz	453.2125	Mobile Direct Output	453.2125	Mobile Direct Input
Tactical	UTAC 41D	156.7 Hz	453.4625	Mobile Direct Output	453.4625	Mobile Direct Input
Tactical	UTAC42D	156.7 Hz	453.7125	Mobile Direct Output	453.7125	Mobile Direct Input
Tactical	UTAC43D	156.7 Hz	453.8625	Mobile Direct Output	453.8625	Mobile Direct Input

* Default operation should be carrier squelch receive, CTCSS 156.7 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
D – Denotes low side of the frequency pair in direct (simplex) mode

3.4 Minimum Requirements for 800 MHz Radio Equipment (806 – 870 MHz) Pre-Rebanding[2]

- FCC Part 90 Type Accepted
- Equipped with P25 software
- Capable of Continuous Tone-Coded Squelch System (CTCSS)
- Capable of Digital Coded Squelch (DCS)
- Compliant with FCC National Public Safety Planning Advisory Committee (NPSPAC) emissions 16K0F3E and 20K0F3E
- Minimum of 10 character alpha numeric display
- Minimum of 256 channels (talkgroups) for both mobile and portable radios
- Minimum of 10 watts power for all mobile radio equipment
- Minimum of 3 watts for all portable radio equipment
- Compliant with Mil Spec 810 C, 810 D, 810 E and 810 F
- Programmed with the Non-Federal 800 MHz National Interoperability Frequencies as defined in the 800 MHz tables listed below

All new 800 MHz radio equipment must be programmed with both the pre- and post-rebanding National Interoperability Channels as defined by NPSTC's Channel Naming Report dated June 13, 2007. Any use as a base station, repeater or control station will require an FCC radio license and approval from Oklahoma NPSPAC Region 34; however, the 800 MHz National Interoperability Channels are covered by a "blanket authorization" from the FCC for mobile operation. Mobile operation is an FCC reference to a radio frequency that is only to be used in a mobile or portable radio. The FCC is currently in the process of rebanding the 800 MHz radio spectrum across the United States. Oklahoma is currently in the process of rebanding its 800 MHz radio spectrum. All pre-rebanding information specific to the 800 MHz spectrum will be removed from this document upon completion of the 800 MHz rebanding initiative.

3.4.1 Repeated 800 MHz Interoperability Channels (Pre-Rebanding)

Repeated 800 MHz Interoperability Channels for Subscriber Equipment (Pre-Rebanding) ±						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	ICALL	156.7 Hz	821.0125	Mobile Output	866.0125	Mobile Input
Tactical	ITAC 1	156.7 Hz	821.5125	Mobile Output	866.5125	Mobile Input
Tactical	ITAC 2	156.7 Hz	822.0125	Mobile Output	867.0125	Mobile Input
Tactical	ITAC3	156.7 Hz	822.5125	Mobile Output	867.5125	Mobile Input
Tactical	ITAC4	156.7 Hz	823.0125	Mobile Output	868.0125	Mobile Input

*Default operation should be carrier squelch receive, CTCSS 156.7(5A) transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
± This information will be deleted upon completion of the 800 MHz rebanding initiative currently taking place in Oklahoma.

[2] This section will be removed from this document upon completion of the 800 MHz rebanding initiative.

3.4.2 Simplex 800 MHz Interoperability Channels (Pre-Rebanding)

Simplex 800 MHz Interoperability Channels for Subscriber Equipment (Pre-Rebanding) ±						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	ICALL	156.7 Hz	866.0125	Mobile Direct Output	866.0125	Mobile Direct Input
Tactical	ITAC 1	156.7 Hz	866.5125	Mobile Direct Output	866.5125	Mobile Direct Input
Tactical	ITAC 2	156.7 Hz	867.0125	Mobile Direct Output	867.0125	Mobile Direct Input
Tactical	ITAC3	156.7 Hz	867.5125	Mobile Direct Output	867.5125	Mobile Direct Input
Tactical	ITAC4	156.7 Hz	868.0125	Mobile Direct Output	868.0125	Mobile Direct Input

*Default operation should be carrier squelch receive, CTCSS 156.7(5A) transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
D – Denotes low side of the frequency pair in direct (simplex) mode
± This information will be deleted upon completion of the 800 MHz rebanding initiative currently taking place in Oklahoma.

3.5 Minimum Requirements for 800 MHz Radio Equipment (806 – 870 MHz) Post Rebanding

- FCC Part 90 Type Accepted
- Equipped with P25 software
- Capable of Continuous Tone-Coded Squelch System (CTCSS)
- Capable of Digital Coded Squelch
- In Compliance with FCC NPSPAC emissions 16K0F3E and 20K0F3E
- Minimum of 10 character alpha numeric display
- Minimum of 256 channels (talkgroups) for both mobile and portable radios
- Minimum of 10 watts power for all mobile radio equipment
- Minimum of 3 watts for all portable radio equipment
- Compliant with Mil Spec 810 C, 810 D, 810 E and 810 F
- Programmed with the Non-Federal 800 MHz National Interoperability Frequencies as defined in the 800 MHz tables listed below

All new 800 MHz radio equipment must be programmed with both the pre- and post-rebanding national interoperability channels as defined by NPSTC's Channel Naming Report dated June 13, 2007. Any use as a base station, repeater or control station will require an FCC radio license and approval from Oklahoma NPSPAC Region 34; however, the 800 MHz national interoperability channels are covered by a "blanket authorization" from the FCC for mobile operation. Mobile operation is an FCC reference to a radio frequency that is only to be used in a mobile or portable radio. The FCC is currently in the process of rebanding the 800 MHz radio spectrum across the United States. Oklahoma is currently in the process of rebanding its 800 MHz radio spectrum. All pre-rebanding information specific to the 800 MHz spectrum will be removed from this document upon completion of the 800 MHz rebanding initiative.

3.5.1 Repeated 800 MHz Interoperability Channels (Rebanded)

Repeated 800 MHz Interoperability Channels for Subscriber Equipment (Rebanded) ±						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	8CALL90	156.7 Hz	806.0125	Mobile Output	851.0125	Mobile Input
Tactical	8TAC91	156.7 Hz	806.5125	Mobile Output	851.5125	Mobile Input
Tactical	8TAC92	156.7 Hz	807.0125	Mobile Output	852.0125	Mobile Input
Tactical	8TAC93	156.7 Hz	807.5125	Mobile Output	852.5125	Mobile Input
Tactical	8TAC94	156.7 Hz	808.0125	Mobile Output	853.0125	Mobile Input

*Default operation should be carrier squelch receive, CTCSS 156.7(5A) transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
± This information included in this table will become applicable upon completion of the 800 MHz rebanding initiative currently taking place in Oklahoma.

3.5.2 Simplex 800 MHz Interoperability Channels (Rebanded)

Simplex 800 MHz Interoperability Channels for Subscriber Equipment (Rebanded) ±						
Desc	NPSTC ID	CTCSS*	TX Freq	Authorized Use	RX Freq	Authorized Use
Calling	8CALL90D	156.7 Hz	851.0125	Mobile Direct Output	851.0125	Mobile Direct Input
Tactical	8TAC91D	156.7 Hz	851.5125	Mobile Direct Output	851.5125	Mobile Direct Input
Tactical	8TAC92D	156.7 Hz	852.0125	Mobile Direct Output	852.0125	Mobile Direct Input
Tactical	8TAC93D	156.7 Hz	852.5125	Mobile Direct Output	852.5125	Mobile Direct Input
Tactical	8TAC94D	156.7 Hz	853.0125	Mobile Direct Output	853.0125	Mobile Direct Input

*Default operation should be carrier squelch receive, CTCSS 156.7(5A) transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive, and the user instructed how and when to enable/disable.
D – Denotes low side of the frequency pair in direct (simplex) mode
± This information included in this table will become applicable upon completion of the 800 MHz rebanding initiative currently taking place in Oklahoma.

3.6 Communication Equipment Accessories

To date, the minimum requirements for radio equipment accessories have not been defined by the IOCSS. This section will be updated after further assessment by the IOCSS.

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Appendix F Communications Resources Available for Statewide Deployment

Mobile Communications and Command Units

The following table lists the Mobile Communications and Command Units available for statewide deployment:

Command-1	
IMAGE	**DESCRIPTION AND ACTIVATION PROCEDURE**
	Command-1 is a tractor-trailer unit designed to function as a command and communications unit available to respond during local or statewide disasters. It has the capability to bridge different city, county, tribal and/or state agency radio communications systems during a public safety event anywhere in the state. Command-1 is owned and maintained by the Oklahoma Highway Patrol (OHP). **Activation Procedure**: Contact the Incident Resource Hotline at (800) 800-2481.
Command-2	
IMAGE	**DESCRIPTION AND ACTIVATION PROCEDURE**
	Command-2 is based on a 2008 Ford F350 dual platform with a camper-style attachment. It provides rapidly deployable communications for on-site cross-band radio net integration for VHF/UHF/800 MHz, military and amateur radio. It also provides on-site broadband Internet through an on-board satellite link, a satellite and cellular phone communications. This unit can be operated on a stand-alone basis with its on-board generator, and due to its small platform and four-wheel drive capability it can be used almost anywhere. Command-2 is

	owned and maintained by OHP. **Activation Procedure**: Contact the Incident Resource Hotline at (800) 800-2481.
Command-3	
IMAGE	**DESCRIPTION AND ACTIVATION PROCEDURE**
	Command-3 is owned and maintained by the Department of Agriculture. This unit is a Chevrolet Silverado 3500HD 4WD pickup truck containing a communications camper-style shell. Command-3 is equipped with multiple VHF, UHF and 800 MHz public safety radio systems, mobile repeaters, a mobile satellite communications system and telephone systems, among other capabilities. The design of Command-3 allows it to traverse rough terrain and operate in confined areas with a minimal amount of personnel. Command-3 was developed using funds from the PSIC Grant Program. **Activation Procedure**: Contact the Incident Resource Hotline at (800) 800-2481.

Communications Site on Wheels (SOW) Units

The following table lists the two Communications SOW Units available for statewide deployment:

ECHO 1	
IMAGE	**DESCRIPTION AND ACTIVATION PROCEDURE**
	Emergency Communications Helping Oklahoma (ECHO 1) is a SOW which has the ability to interface between multiple VHF, UHF and 800 MHz radio systems. It is owned and maintained by the city of Tulsa and was funded in part by a grant from OKOHS. **Activation Procedure:** 1. Call (918) 596-9225, City of Tulsa Public Safety Response Center (Dispatch). 2. Request Dispatch contact the Radio Services Manager. 3. Provide Contact Information. 4. Radio Services Manager will return call to coordinate deployment.

STaR-1	
IMAGE	**DESCRIPTION AND ACTIVATION PROCEDURE**
	STaR-1 is a Strategic Technology Reserve (STR) communications asset which is owned and operated by the City of Oklahoma City. This unit is a radio communications SOW, funded mostly by the PSIC Grant Program through OKOHS. The asset includes multiple radio systems capable of operating anywhere within the state of Oklahoma, independent of, or in tandem with other radio systems. **Activation Procedure:** Contact the Incident Resource Hotline at (800) 800-2481.

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Appendix G Glossary of Acronyms

Glossary of Acronyms	
ACRONYM	DEFINITION
CASM	Communications Assets Survey and Mapping
CBP	Customs and Border Patrol
CCSC	COML Credentialing Subcommittee
CIO	Chief Information Officer
COML	Communications Unit Leader
COMT	Communications Unit Technician
COUASI	Central Oklahoma Urban Area Security Initiative
CPJ	Cushing Pipeline Junction
DHS	United States Department of Homeland Security
DPS	Oklahoma Department of Public Safety
EDACS	Enhanced Digital Access Communication System
EMS	Emergency Medical Services
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FTC	Federal Transfer Center
FY	Fiscal Year
GWG	Governance Working Group
HSGP	Homeland Security Grant Program
ICTAP	Interoperable Communications Technical Assistance Program
IECGP	Interoperable Communications Grant Program
IMC	Integrated Multi-Site Controller
IOCSS	Interoperable Communications State Standards Working Group
IP	Internet Protocol
ISSI	Inter-RF Subsystem Interface
JPATS	Justice Prisoner and Alien Transportation System
MHz	Megahertz
MKARNS	McClellan-Kerr Arkansas River Navigation System
NECP	National Emergency Communications Plan
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NWC	National Weather Center
NWS	National Weather Service
OCPD	Oklahoma City Police Department
ODOT	Oklahoma Department of Transportation
OEC	Office of Emergency Communications
OHP	Oklahoma Highway Patrol
OIEC	Oklahoma Interoperable Executive Committee

Glossary of Acronyms	
ACRONYM	**DEFINITION**
OKFOG	Oklahoma Field Operations Guide
OKOHS	Oklahoma Office of Homeland Security
OKWIN	Oklahoma Wireless Information Network
POC	Point of Contact
P25	Project 25
PSIC	Public Safety Interoperable Communications
RRS	Regional Response System
SAA	State Administrative Agency
SCIP	Statewide Communication Interoperability Plan
SIGB	Statewide Interoperability Governing Body
SOP	Standard Operating Procedure
SOW	Site on Wheels
STR	Strategic Technology Reserve
SWIC	Statewide Interoperability Coordinator
TA	Technical Assistance
TIC-P	Tactical Interoperable Communications Plan
UASI	Urban Area Security Initiative
UHF	Ultra High Frequency
VHF	Very High Frequency

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