



State of Indiana Communications Interoperability Plan



...the ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized. Communications interoperability makes it possible for emergency response agencies to work effectively together, maximize resources, and effectively plan for government support operations, emergencies, disaster relief and recovery."

December 3, 2007

Distribution is limited to United States Department of Homeland Security and to those authorized by the State of Indiana involved in SCIP development and implementation



State of Indiana Statewide Communications Interoperability Plan

Executive Summary

In many ways, the state of Indiana is ahead in the effort to provide interoperable communications. Local first responders and elected officials met in the late 1990's and formulated a plan to build and implement an all-inclusive, technologically feasible system for interoperable public safety communications. This locally-driven [Statewide Public Safety Voice/Data Communications System Strategic Plan](#) (1998) provided the roadmap to what may be the only true statewide interoperable communications system in the country today – Project Hoosier SAFE-T. Each day, thousands of Hoosier first responders use SAFE-T as their primary communications system as they work to protect Indiana citizens. The system also provides emergency interoperable communications capabilities for hundreds of additional public safety agencies across the state still operating on legacy systems. Although this plan is nearly 10 years old, it contains much of the information, strategy and methodology required for today's Statewide Interoperable Communications Plan (SCIP).

About Indiana's Statewide Interoperable Communications System

Project Hoosier SAFE-T, completed summer 2007, is an 800 MHz trunked voice and data communications system which provides both day-to-day and mission critical interoperability for Indiana local, state, and federal first responders and public safety officials. SAFE-T supports both analog and digital radios, providing 95% mobile and portable radio coverage statewide using 130+ communications sites throughout Indiana. Recent coverage tests confirm this contractually-guaranteed standard is being met or exceeded.

The state of Indiana has funded build-out of the system backbone and subsequent maintenance and operations costs through 2019. Future growth and migration to the next generation technology beyond 2019 will occur through additional funding requests of the state General Assembly. Participating agencies provide their own user equipment, including dispatch consoles, radios and mobile radio modems and computers, which they can buy through the state quantity purchase agreement. Participation in Project Hoosier SAFE-T is voluntary and agencies pay no access or monthly user fees.

The statewide goal - to make interoperable communications affordable and available for every community – is reaching new levels as more local communities join the statewide system. To date, more than 34,000 radio IDs from all 92 Indiana counties are programmed into the SAFE-T system database. These numbers include first responders and public safety professionals from 290 local and county law enforcement agencies; 399 fire departments; 52 EMS providers; 16 State Agencies; 21 school districts; 68 hospitals; 29 universities/colleges; and three federal agencies.

While these successes are significant, the fact remains many first responder agencies across the state remain on legacy UHF, VHF, or standalone 800 MHz systems, either by choice or by financial necessity.

A Statewide Plan for Interoperable Communications – Follow the Plan

The purpose of this document is to build upon the vision provided by local first responders in 1998; to provide a plan for communications interoperability based upon the reality of today as well as our vision for the future. This statewide plan details methods by which diverse systems may be linked in the event of a natural or man-made disaster, while remaining focused upon our ultimate objective – to encourage and facilitate migration to the statewide SAFE-T system.



This statewide plan is a living document. It is structured to be enhanced and refined as the system is stressed during emergency events and further tested during scheduled exercises. Additionally, the plan will be fully updated biennially to reflect required system enhancements, as SAFE-T system managers monitor growth resulting from agencies migrating to the system for their primary, day-to-day interoperable communications needs. Regional user groups meet throughout the year to provide ongoing input, and the Integrated Public Safety Commission will convene annual statewide Communications Conferences to help ensure widespread local, county, state and federal involvement in the system management.

Tribal Entities

There are no federally recognized Indian tribes based in Indiana today. However, the federally recognized Pokagon Band of Potawatomi Indians (with a total membership of 3150), has tribal service areas in northwest Indiana, where some of its members live. The tribe does not currently have assured sovereignty within the State of Indiana.

The state has recently reinstated the Indiana Native American Indian Affairs Commission, which advises state government officials on American Indian issues in the areas of employment, education, civil rights, health, and housing. The IPSC will remain in contact with this agency to ensure that emerging communications needs of Indiana tribes are met.



Mission & Goals

MISSION

Indiana's mission is to provide an interoperable and reliable public safety communications system to all Hoosier first responders and public safety professionals for use during routine, emergency and task force situations. We will strengthen community safety and security by minimizing the financial and technological barriers to interoperable communications and by breaking down regionalization of systems through increased cooperation and communication.

GOALS

- Expand the interoperable communications network to all public safety agencies statewide.
- Provide a common understanding of communications interoperability throughout the state of Indiana
- Provide on-demand training for interoperable communications
- Coordinate local, state, and federal public safety resources; tear down agency and geographical boundaries; and foster cooperation between police, fire, EMS, and other Hoosier first responder and public safety agencies.
- Continue to shrink the "system of systems" by encouraging migration to the state SAFE-T interoperable communications network.
- Mirror the successful locally driven strategy to create a vision for next generation integrated data communications.



Interoperability in Indiana: A Graphical Representation

State of Indiana Statewide 800 MHz Communications System Interoperability with Legacy Systems System Redundancy

Project Hoosier SAFE-T
130+ sites statewide. Trunked 800 MHz SmartZone system. 35,000 registered users interoperate seamlessly statewide via shared talkgroups.

VHF: Agencies on legacy VHF systems interoperate either by using a gateway device or by using the NIMS ICS protocol, whereby the Incident Commander uses an 800 MHz radio programmed onto the statewide system.

UHF: A few UHF systems remain throughout Indiana. Interoperability planning includes the use of gateways and 800MHz radios distributed to incident command personnel and field personnel.

System Redundancies

Mobile Intelli-Repeater Sites (MIRS)

Currently Indiana has one MIRS and has applied for another through PSIC grant funding. The MIRS is a 5 channel mobile site on wheels with telescoping antenna that can be deployed in the event of a disaster.

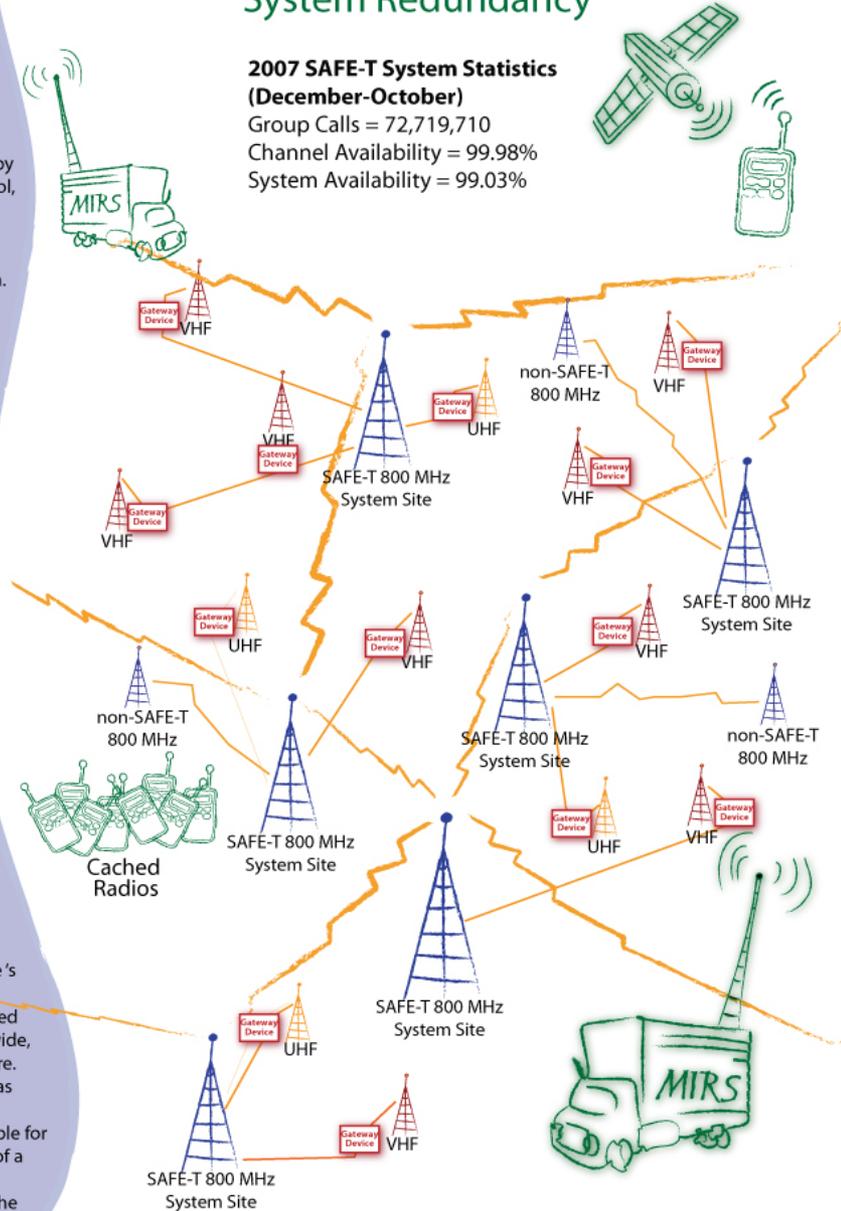
Additionally, the Indiana Department of Homeland Security has a Mobile Command Vehicle with extensive communications capabilities as well as mobile command vehicles deployed in each of the state's 10 Homeland Security Districts.

Satellite Phones - Indiana has invested in satellite phones, distributed statewide, to deploy in the event of system failure.

Cached Radios - Indiana currently has 200 cached radios programmed with mutual aid channels which are available for immediate deployment in the event of a disaster. The state has applied for an additional 75 radios to add to the cache via PSIC grant funds.

2007 SAFE-T System Statistics (December-October)

Group Calls = 72,719,710
Channel Availability = 99.98%
System Availability = 99.03%





Plan Mapped to Criteria

The Indiana SCIP addresses all of the Criteria. However, since Indiana has almost completed the buildout and implementation of a statewide interoperable communications system, the template did not offer an effective way to present the complete past, present and future state of interoperability in the state. Therefore, the chart below contains links to the area in the Indiana SCIP which speaks to the stated criteria.

1. Background and Preliminary Steps	Section/ /Page	Section Title
1.1. Overview and background information; geographic and demographic.	2	State Overview
1.2. Agencies & organizations that participated in developing the plan.	1.2	SCIP Participating Agencies
1.3. Point of contact.	1.4	SCIP Point of Contact
1.4. Current communications and interoperability environment.	3	Current Statewide Assessment
1.5. Problems & solutions using SAFECOM Interoperability Continuum.	3 5	Strengths & Weaknesses Our Vision for the Future
1.6. Tactical Interoperability Communications Plans (TICP)	2.7.4 3.7	Indiana UASI Regions Existing TIC Plans
1.7. Scope and timeframe of the plan.	6	Scope and Timeframe
2. Strategy		
2.1. Strategic vision, goals, and objectives, including how they connect with existing plans within the state.	5	Strategy
2.2. Strategic plan for coordination with neighboring states.	3.8 5.4.4	Multi-State Initiatives Renew MPSCC
2.3. Strategic plan for addressing data interoperability.	3.2.8 5.1.5	Mobile Data Data Interoperability - INdata
2.4. Strategy for addressing catastrophic loss of communication assets - redundancies in the communications interoperability plan.	4.3	System Redundancies
2.5. NIMS and National Response Plan Compliance.	4.10	National Incident Management Systems (NIMS) Compliance
2.6. Strategy for addressing communications interoperability with the major transit systems, intercity bus service providers, ports, and passenger rail operations.	5.3.2	Transit Systems, Intercity Bus, Ports, and Passenger Rail Operations.
2.7. Periodic review process.	8	SCIP Review and Update Process
3. Methodology		
3.1. Multi-jurisdictional, multi-disciplinary input.	1.3	Methodology
3.2. Process for continued local involvement/ building local support of the plan.	5.4.5 5.4.10	Statewide User Group Annual Interoperability Conference
3.3. TICP incorporation into the statewide plan.	2.7.4 3.7	Indiana UASI Regions Existing TIC Plans
3.4. Strategy for implementing all components of the statewide plan.	6	SCIP Review & Update Process



State of Indiana Communications Interoperability Plan

4. Governance		
4.1. Executive/legislative authority for the governing body of the interoperability effort.	3.1	Governing Body
4.2. Overview of the governance structure that will oversee development and implementation of the plan. Detail representation.	3.1	Governance
4.3. Charter for the governing body	3.1.2	Enabling Legislation
4.4. Members of the governing body and any of its committees.	3.1.3 3.1.5	Commission Membership Subcommittees/Advisory Groups
4.5. Meeting schedule for the governing body.	3.1.4	Meeting Schedule
4.6. Multi-jurisdictional, multi-disciplinary agreements.	3.1.6	Memoranda of Understanding
5. Technology		
5.1. Statewide capabilities assessment.	3.2	Technology
5.2. Plans for continued support of legacy systems.	3.2.3 3.2.4	VHF systems UHF systems
5.2.1. Migration plan for moving from existing technologies to newly procured technologies.	3.3	Usage
5.2.2. Process to ensure that new purchases comply with the statewide plan, while generally allowing existing equipment to serve out its useful life.	5.4.2	Encourage migration to the statewide system
6. Standard Operating Procedures (SOPs)		
6.1. Assessment of current local, regional, and state operating procedures which support interoperability.	3.4	Current Local, Regional & State Standard Operating Procedures
6.2. Process by which the state, regions, and localities will develop, manage, maintain, upgrade, and communicate standard operating procedures (SOPs).	5.2	SOP Initiatives
6.3. Agencies included in the development of the SOPs, and the agencies expected to comply with the SOPs.	4.2	County Communications Plans
6.4. Demonstrate how the SOPs are NIMS-compliant in terms of the Incident Command System (ICS) and preparedness.	4.2	County Communications Plans
7. Training and Exercises		
7.1. Statewide training and exercise program.	3.5	Current Training and Exercise Programs
7.2. Process for training, exercises, and certification.	5.3	Training Initiatives
7.3. Process ensures that training is cross-disciplinary.	5.4.1	Training Initiatives
8. Usage		
8.1. Plan for ensuring regular usage of the equipment/SOPs.	3.3 5.4	Usage Usage Initiatives
9. Funding		
9.1. Committed sources of funding.	3.6	System Funding – Present to 2019
9.2. Comprehensive funding strategy, including process for identifying ongoing funding sources, anticipated costs, and resources needed.	5.5	Funding Initiatives



10. Implementation		
10.1. Prioritized action plan with short- and long-term goals.	6	Scope & Timeframe
10.2. Performance measures.	7	Performance Measures
10.3. Plan for educating policy makers practitioners on goals and initiatives.	8	SCIP Review & Update
10.4. Roles and opportunities for agencies in the implementation of the statewide plan.	8	SCIP Review & Update
10.5. Plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short- and long-term funding sources.	5	Our Vision for the Future
10.6. POC responsible for implementing the plan.	1.4	SCIP Point of Contact
10.7. Critical success factors	7.1	Outcomes
11. PSIC Requirements*		
11.1 Describe how public safety agencies will plan and coordinate, acquire, deploy and train on interoperable communications equipment, software and systems that: 1) utilize reallocated public safety - the public safety spectrum in the 700 MHz frequency band; 2) enable interoperability with communication systems that can utilize reallocated public safety spectrum for radio communications; or 3) otherwise improve or advance the interoperability of public safety communications system that utilize other public safety spectrum bands	4.11	Public Safety Interoperable Communications (PSIC) Planning
11.2 Describe how a strategic technology reserve (STR) will be established and implemented to pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.	4.3	System Redundancy
11.3 Describe how local and tribal government entities' interoperable communications needs have been included in the planning process and how their needs are being addressed.	iii	Executive Summary
11.4. Describe how authorized non-governmental organizations' interoperable communications needs have been included in the planning process and how their needs are being addressed (if applicable).	5.5.9	Expand Non-Governmental/Private Sector Involvement



Table of Contents

RECORD OF CHANGE	I
EXECUTIVE SUMMARY	II
MISSION & GOALS	IV
INTEROPERABILITY IN INDIANA: A GRAPHICAL REPRESENTATION	V
TABLE OF CONTENTS	IX
LIST OF FIGURES & TABLES	XIII
1 BACKGROUND	1
1.1 HISTORICAL PERSPECTIVE	1
1.2 SCIP PARTICIPATING AGENCIES	2
1.3 METHODOLOGY	3
1.4 SCIP POINT OF CONTACT	4
2 STATE OVERVIEW	5
2.1 DEMOGRAPHICS	5
2.1.1 POPULATION.....	5
2.1.2 FIRST RESPONDER POPULATION.....	6
2.2 INFRASTRUCTURE	6
2.2.1 TRANSPORTATION	6
2.2.2 RAILROADS.....	8
2.2.3 PORTS.....	9
2.2.4 AVIATION.....	9
2.2.5 PUBLIC TRANSPORTATION	9
2.3 GEOGRAPHY	9
2.4 NATURAL RESOURCES	9
2.5 CLIMATE	10
2.6 RISKS & VULNERABILITIES	10
2.6.1 NATURAL HAZARDS.....	10
2.6.2 MILITARY FACILITIES	11
2.6.3 SIGNIFICANT EVENTS	11
2.7 REGIONS & JURISDICTIONS	11
2.7.1 COUNTIES, CITIES, TOWNS & TOWNSHIPS.....	11
2.7.2 OTHER REGIONS/DISTRICTS.....	12
2.7.3 HOMELAND SECURITY DISTRICTS.....	12
2.7.4 INDIANA UASI REGIONS.....	12



3 CURRENT STATEWIDE ASSESSMENT 17

3.1 GOVERNANCE18

3.1.1 GOVERNING BODY - INTEGRATED PUBLIC SAFETY COMMISSION (IPSC) 18

3.1.2 ENABLING LEGISLATION 18

3.1.3 COMMISSION MEMBERSHIP..... 19

3.1.4 MEETING SCHEDULE 19

3.1.5 SUBCOMMITTEES/ADVISORY GROUPS 19

 3.1.5.1 STATE AGENCY PUBLIC SAFETY COMMITTEE 19

 3.1.5.2 IPSC POLICY SUB-COMMITTEE..... 20

3.1.6 MEMORANDA OF UNDERSTANDING 20

3.2 TECHNOLOGY22

3.2.1 STATEWIDE 800 MHZ SYSTEM STATISTICS & USERS 22

3.2.2 OTHER 800 MHZ SYSTEMS 24

3.2.3 VHF SYSTEMS 24

3.2.4 UHF SYSTEMS 24

3.2.5 700 MHZ 24

 3.2.5.1 700 MHZ INTEROPERABILITY CHANNELS 25

3.2.6 MOBILE DATA 26

 3.2.6.1 DATA SYSTEMS INTEROPERABILITY..... 26

3.3 USAGE27

3.3.1 800 MHZ REGIONAL & STATEWIDE MUTUAL AID CHANNELS 27

3.3.2 MUTUAL AID COMMAND & CONTROL 28

3.3.3 800MHZ INTEROPERABILITY WITH NON-SAFE-T 800 MHZ SYSTEMS: NPSPAC 31

3.3.4 VHF INTEROPERABLE COMMUNICATIONS/MUTUAL AID RESPONSE..... 33

3.3.5 LEGACY SYSTEMS COMMUNICATIONS (FIRE/EMS/HOSPITAL-IHERN) 33

3.3.6 UHF INTEROPERABLE COMMUNICATIONS/MUTUAL AID RESPONSE 36

3.4 CURRENT LOCAL, REGIONAL AND STATE OPERATING PROCEDURES36

3.5 CURRENT TRAINING AND EXERCISE PROGRAMS37

3.5.1 THE MUSCATATUCK URBAN TRAINING CENTER (MUTC) 38

3.6 SYSTEM FUNDING – PRESENT TO 201938

3.7 EXISTING UASI AREAS/TIC PLANS41

3.8 MULTI-STATE INITIATIVES41

4 ONGOING INITIATIVES 42

4.1 CASM TOOL42

4.2 COUNTY COMMUNICATIONS PLANS.....43

4.3 SYSTEM REDUNDANCY43

4.3.1 MOBILE INTELLI-REPEATER SITE (MIRS)..... 43

4.3.2 SATELLITE RADIOS 44

4.3.3 CACHED RADIOS 44

4.4 WEB EOC.....45



- 4.5 RADIOS FOR RESPONDERS45
- 4.6 ENHANCED WIRELESS E911 PROJECT45
- 4.7 INCREASE SYSTEM PERFORMANCE/CAPACITY46
- 4.8 LOCAL/STATE COOPERATION.....46
- 4.9 800 MHZ REBANDING46
- 4.10 NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) COMPLIANCE.....47
 - 4.10.1 EMERGENCY SUPPORT FUNCTIONS48
- 4.11 PUBLIC SAFETY INTEROPERABLE COMMUNICATIONS (PSIC) PLANNING48
- 5 OUR VISION FOR THE FUTURE 48**
 - 5.1 GOVERNANCE INITIATIVES.....49**
 - 5.1.1 FORMALLY IDENTIFY INTEROPERABILITY COORDINATOR49
 - 5.1.2 ESTABLISH DATA INTEROPERABILITY GOVERNANCE STRUCTURE.....49
 - 5.1.3 FORMALIZE WIRELESS COMMUNICATIONS POLICY ACADEMY EXECUTIVE TEAM AS SEIC49
 - 5.2 TECHNOLOGY INITIATIVES49**
 - 5.2.1 FORMALIZE STATEWIDE STRATEGY FOR 700MHZ/PUBLIC SAFETY INTEROPERABLE COMMUNICATIONS (PSIC) INITIATIVES.....50
 - 5.2.2 INDIANA DATA ARCHITECTURE TECHNOLOGY ALLIANCE - INDATA50
 - 5.3 SOP INITIATIVES50**
 - 5.3.1 ESTABLISH AN ONLINE REPOSITORY FOR SOPs51
 - 5.3.2 TRANSIT SYSTEMS, INTERCITY BUS,, PORTS, AND PASSENGER RAIL OPERATIONS.51
 - 5.4 TRAINING INITIATIVES51**
 - 5.4.1 DEVELOP WEB-BASED TRAINING/CERTIFICATION PROGRAM51
 - 5.5 USAGE INITIATIVES51**
 - 5.5.1 COMMON LANGUAGE.....51
 - 5.5.2 ENCOURAGE MIGRATION TO THE STATEWIDE SYSTEM WHILE ALLOWING LEGACY SYSTEMS TO SERVE OUT THEIR USEFUL LIFE.52
 - 5.5.3 NIMS COMPLIANCE.....52
 - 5.5.4 RENEW COMMITMENT TO MPSCC.....53
 - 5.5.5 ESTABLISH STATEWIDE USER GROUP.....53
 - 5.5.6 USE CASM TO MAXIMIZE SYSTEM PENETRATION/AGENCY INVOLVEMENT53
 - 5.5.7 WEB-BASED INFORMATION SHARING53
 - 5.5.8 MAXIMIZE AMATEUR RADIO USER COMMUNITY53
 - 5.5.9 EXPAND NON-GOVERNMENTAL/PRIVATE SECTOR INVOLVEMENT.....54
 - 5.5.10 ANNUAL INTEROPERABILITY CONFERENCE54
 - 5.6 FUNDING INITIATIVES54**
 - 5.6.1 LEVERAGE GRANT WRITING RESOURCES FOR LOCALS55
- 6 SCOPE & TIMEFRAME (2007-2010) 55**
- 7 PERFORMANCE MEASURES..... 56**
 - 7.1 OUTCOMES57**



8	SCIP REVIEW & UPDATE PROCESS	57
9	SUMMARY	59
	APPENDIX A: REFERENCE AND ADDENDUM	60
	APPENDIX B: ACRONYM KEY	61
	APPENDIX C: GLOSSERY OF TERMS	63



List of Figures & Tables

List of Figures

Interoperability in Indiana – A Graphical Representation
Indiana Population
Indiana Roadways
Indiana Public Airports, Railways in Use,
Ports and Power Facilities
Department of Homeland Security Districts
Indiana State Police Districts
Indiana Department of Transportation Districts
IPSC Staffing Chart
Governance: Flow of Information
Indiana's Statewide 800 MHz System: Project Hoosier SAFE-
Mutual Aid Districts
Project Hoosier SAFE-T Sources of Funding
Indiana Department of Natural Resources Districts
NPSPAC MAP

List of Tables

Indiana's 10 Most Populous Cities
Indiana's 10 Most Populous Counties
Mutual Aid Regions
NPSPAC Call & Tactical Channels
VHF Fire Interoperability Frequency Plan
UHF Fire and EMS Interoperability Frequency Plan
VHF EMS Air Ambulance Services
VHF Hospital Emergency Radio, statewide EMS to Hospital
LoW Band VHF/National American Red Cross
UHF NPSPAC Channels :
Statewide NIMS Implementation



1 BACKGROUND

1.1 Historical Perspective

The U.S. Department of Homeland Security rightly emphasizes stakeholder involvement in the interoperable communications planning process. In Indiana, this early and consistent local involvement led to a genuine statewide interoperable communications plan.

“A Compelling Case for Interoperability:” Indiana’s Statewide Public Safety Voice/Data Communications System Strategic Plan.

Instead of building a system from the top down, hundreds of local police, sheriffs, firefighters, elected officials and other interested users met in a series of statewide Governor sponsored summits in the late 1990’s. A clear message came from these summits: Interoperability is not about technology. It’s about money and cooperation. A cutting-edge system is useless if communities can’t afford the equipment to use it or if they simply don’t want to participate.

As a result of the locally-driven planning process, Project Hoosier SAFE-T (Safety Acting for Everyone – Together) has evolved into a realistic, wide-berth network which allows almost all local systems, from older VHF/UHF/800 technology to the newest digital systems, to interoperate.

SAFE-T is a Motorola 4.1 Astro Smartzone Omni-Link 800 MHz trunked voice system and Motorola Private Data TAC mobile data system. It supports both analog and digital radios, providing 95% mobile radio coverage statewide, with 95% reliability for portable on the street use within the coverage area. The state is fully funding both operation and maintenance of the statewide backbone which includes: some state owned towers, antenna systems, shelters, backup power generators, transmitters and receivers. User agencies purchase their mobile and portable radios and dispatch consoles along with mobile radio modems and laptops for access to the mobile data system. Agencies retain significant autonomy with regard to use the system, structure/sharing of talkgroups and interoperable communications planning at the local and regional levels.

It is important to note that SAFE-T is not just an interoperable communications system; but, that it is the primary communications system for [hundreds of Indiana public safety agencies](#), and these numbers are growing now that the construction and implementation phase is complete. It is also important to note that Project Hoosier SAFE-T is the statewide strategy for interoperable communications. The strategic plan of 1998 was developed by local stakeholders; the [commission](#) that oversees system implementation and policy is composed of membership from the original stakeholder community.

This does not mean first responders who continue to use legacy systems are left out of the interoperable picture. Indeed, many of these legacy system users do have Project Hoosier SAFE-T 800 MHz radios operational on the system, and interoperate with surrounding communities by sharing radios, patching to talkgroups and using mutual aid/interoperable talkgroup plans.

The creation of this statewide interoperable communications plan is intended to not only establish direction for achieving further interoperability, but revalidate and reinforce the original public safety interoperable communications vision established in 1998.



From 1999 to Today

The 2002 Indiana General Assembly, spurred in part by the 9-11 tragedy, authorized funding for Project Hoosier SAFE-T. No new funding source was created – rather a redirected portion of technology funds already available from certain Bureau of Motor Vehicle transactions.

During the first few years of system buildout, some of the above designated funds were directed by the General Assembly toward helping eliminate a backlog in the state’s DNA labs, which limited system construction. Governor Mitch Daniels, working closely with the General Assembly restored this funding in 2005, allowing system buildout to proceed at an accelerated rate. The original system buildout was completed in 2007. Several local and county government entities have, or are planning to add SAFE-T radio sites to the system to enhance local and in-building coverage. These sites are constructed with funding from community appropriations or local grants. After construction Project Hoosier SAFE-T funds all infrastructure maintenance and operational costs for the additional sites. The SAFE-t staff will continue to add communications sites to the SAFE-t system as coverage requirements change overtime.

The funding source to pay for system operation and maintenance (approximately \$13 million a year) exists through 2019. Future upgrades and technology migration funding will be appropriately requested beyond the current funding authorization period.

Agencies who participate in Project Hoosier SAFE-T pay for their own subscriber equipment (radios) through local/regional budget allocation or grant funds.

1.2 SCIP Participating Agencies

In 2006, the Integrated Public Safety Commission, in concert with the Indiana Department of Homeland Security, applied for and was awarded a grant from the National Governor’s Association to participate in their Public Safety Wireless Communications Policy Academy. This grant was designed to help facilitate executive level stakeholders, who have interest in achieving higher level interoperable communications for public safety, toward formulation of the State of Indiana Communications Interoperability Plan.

To ensure participation at the highest level, Governor Mitch Daniels appointed representatives from the following public safety community:

- local law enforcement
- local fire/EMS/public safety services,
- local elected officials
- local communications/E911/dispatch community
- state law enforcement
- state homeland security
- owner/operator of a communications system

The membership has met and participated in the NGA Policy Academy throughout the year to not only provide local involvement in the plan, but to assist with drafting and approval of the plan.

It is important to note that membership on the committee represents not only 800MHz Project Hoosier SAFE-T users, but VHF and UHF and legacy 800MHz community. Current members are:

SCIP PARTICIPATING MEMBERS

John Von Arx	Public Safety Policy Director, Governor's Office	jvonarx@gov.IN.gov
--------------	---	--



Eric Dietz	Director, Indiana Department of Homeland Security	jedietz@dhs.IN.gov
Lori Forrer	Communications Supervisor, Cass County Sheriff Dept.	e911@co.cass.in.us
Nick Gulling	Sheriff, Hancock County	ngulling@hancockcoingov.org
Jason Hutchins	Dep. Dir., Research & Public Policy, Indiana Criminal Justice Institute	jhutchens@cji.in.gov
Kevin Morlan	Major, Jeffersonville Police Department	KMorlan@CityofJeff.net
Robert Plummer	Public Safety Director, Fire Chief City of Bluffton	pubsafedirector@ci.bluffton.in.us
Fred Pryor	Lt. Colonel, Support Services, Indiana State Police	fpryor@isp.IN.gov
David Smith	IPSC Implementation Director, Integrated Public Safety Commission –Project Hoosier SAFE-T	dsmith@ipsc.state.in.us

This group will continue to function well after the NGA grant requirements have been satisfied to help ensure the plan's full implementation. As part of their implementation activities, the SCIP Executive Committee will periodically report their progress to the Integrated Public Safety Commission.

Contributing Members

Sally Fay, Communications Director
Integrated Public Safety Commission

Roger Koelpin, Planner
Indiana Department of Homeland Security

Diane Mack, Strategic Planning Branch
Indiana Department of Homeland Security

Joshua Ross, Research Manager
Indiana Criminal Justice Institute

Don West, Communications
Indiana Department of Homeland Security

1.3 Methodology

The state of Indiana used many of the federally-provided tools to formalize its statewide interoperable communications plan, including SAFECOM's interoperability continuum. The Integrated Public Safety Commission (IPSC), as an executive governance body, was not structured at a level to develop and produce the interoperable communications plan without expanded participation by local, county and state level practitioners. The SCIP Executive Committee, appointed by Governor Daniels was deemed the appropriate



body for the detailed work required to develop the plan with a reporting mechanism in place to provide periodic updates on plan development to the IPSC.

As presented earlier, Indiana's participation in the NGA Policy Academy enabled members to glean best practices and shared experiences toward development of a strategic plan. Additional expertise from the Office for Interoperability and Compatibility (OIC), and SAFECOM productivity tools for use in development of the statewide plan were extremely useful. Examples include:

- SAFECOM Interoperability Continuum
- Statewide Communications Interoperability Planning (SCIP) Methodology
- Statewide Interoperability Planning Guidebook
- CASM (Communications Asset Survey Mapping) Tool for strategic planning

To provide critical background data, the Integrated Public Safety Commission, in cooperation with the Indiana Department of Homeland Security, distributed surveys to more than 2,100 federal, state, county and local agencies. Additional interviews with Emergency Management Directors were conducted to determine current and future interoperable communications initiatives.

The ongoing results of these activities are providing the Statewide Plan team with the data needed to update and refresh the statewide system profile.

1.4 SCIP Point of Contact

The 10-person Integrated Public Safety Commission staff, led by the State Interoperability Coordinator, ensures that the Statewide Plan meets the communications interoperability needs of Indiana's public safety professionals and aligns with direction from the state and federal governments. Responsibilities include the following:

- Liaise among the local and regional public safety community, state agencies and officials, and the federal government
- Drive and coordinate the effort to implement the Statewide Plan
- Revise the Statewide Plan annually
- Ensure proper representation within the interoperability governance structure
- Develop and measure long-term and annual performance measures to show progress towards improved interoperability
- Coordinate the compilation of state investment justifications for communications interoperability
- Serve as the liaison between the IPSC and other groups
- Pursue funding support for interoperable communication projects in addition to future planning and implementation of 700MHz.

Contact: David Smith
Interim Interoperability Coordinator
Integrated Public Safety Commission
100 N. Senate Avenue, N340
Indianapolis, IN 46208
317.233.9169
dsmith@ipsc.IN.gov

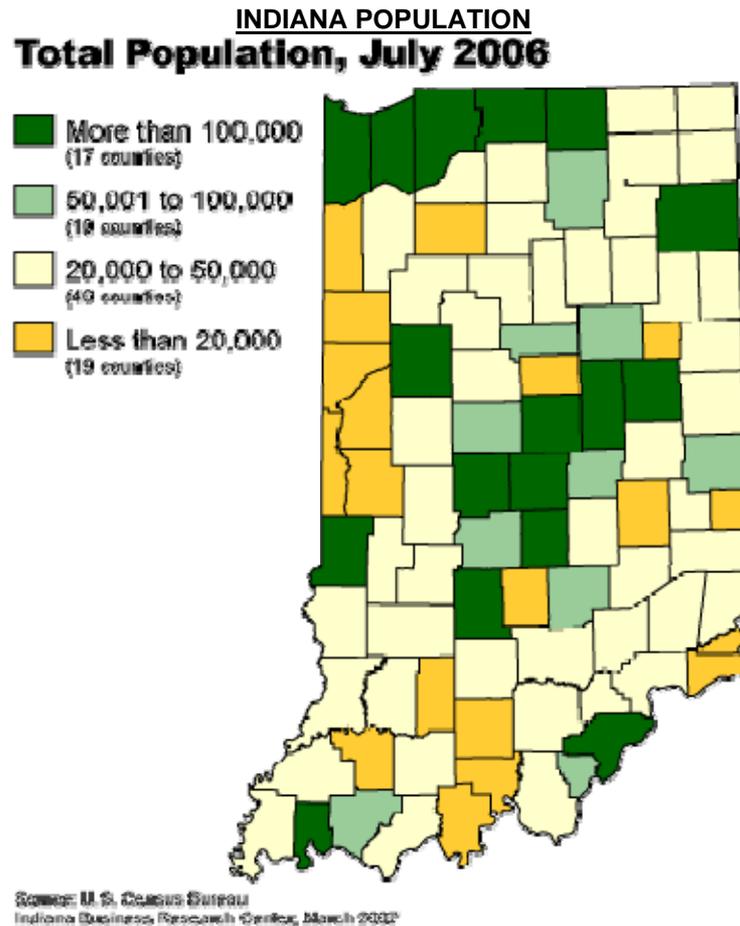


2 STATE OVERVIEW

2.1 DEMOGRAPHICS

2.1.1 Population

In 2006, Indiana's population was 6,313,520, ranking it 15th in the nation. The average population per square mile is 176. Currently, the counties of Allen, Elkhart, Lake, Marion, St. Joseph and Vanderburgh comprise over 37 percent of the population in the state. The largest population center in the state is Marion County with 814,000 and least populated being Ohio County with 5,300 residents.





INDIANA'S 10 MOST POPULOUS CITIES
(Source: US Census Bureau, 2005 Estimates)

RANK	CITY	COUNTY	POPULATION
1	Indianapolis	Marion	784,118
2	Fort Wayne	Allen	223,341
3	Evansville	Vanderburgh	115,918
4	South Bend	St Joseph	105,262
5	Gary	Lake	98,715
6	Hammond	Lake	79,217
7	Bloomington	Monroe	69,017
8	Muncie	Delaware	66,164
9	Lafayette	Tippecanoe	60,459
10	Carmel	Hamilton	59,243

INDIANA'S 10 MOST POPULOUS COUNTIES
(Source: US Census Bureau, 2005 Estimates)

RANK	COUNTY	LARGEST CITY	POPULATION
1	Marion	Indianapolis	863,133
2	Lake	Gary	493,297
3	Allen	Fort Wayne	344,006
4	St. Joseph	South Bend	266,160
5	Hamilton	Carmel	240,685
6	Elkhart	Elkhart	195,362
7	Vanderburgh	Evansville	173,187
8	Porter	Portage	157,772
9	Tippecanoe	Lafayette	153,875
10	Madison	Anderson	130,412

2.1.2 First Responder Population

There are approximately 37,000 firefighters; 12,000 law enforcement officers; 26,000 certified emergency medical service professionals; 95 local emergency management/homeland security directors; 10,000 military professionals; and 142,000 health professionals across the state.

2.2 Infrastructure

2.2.1 Transportation

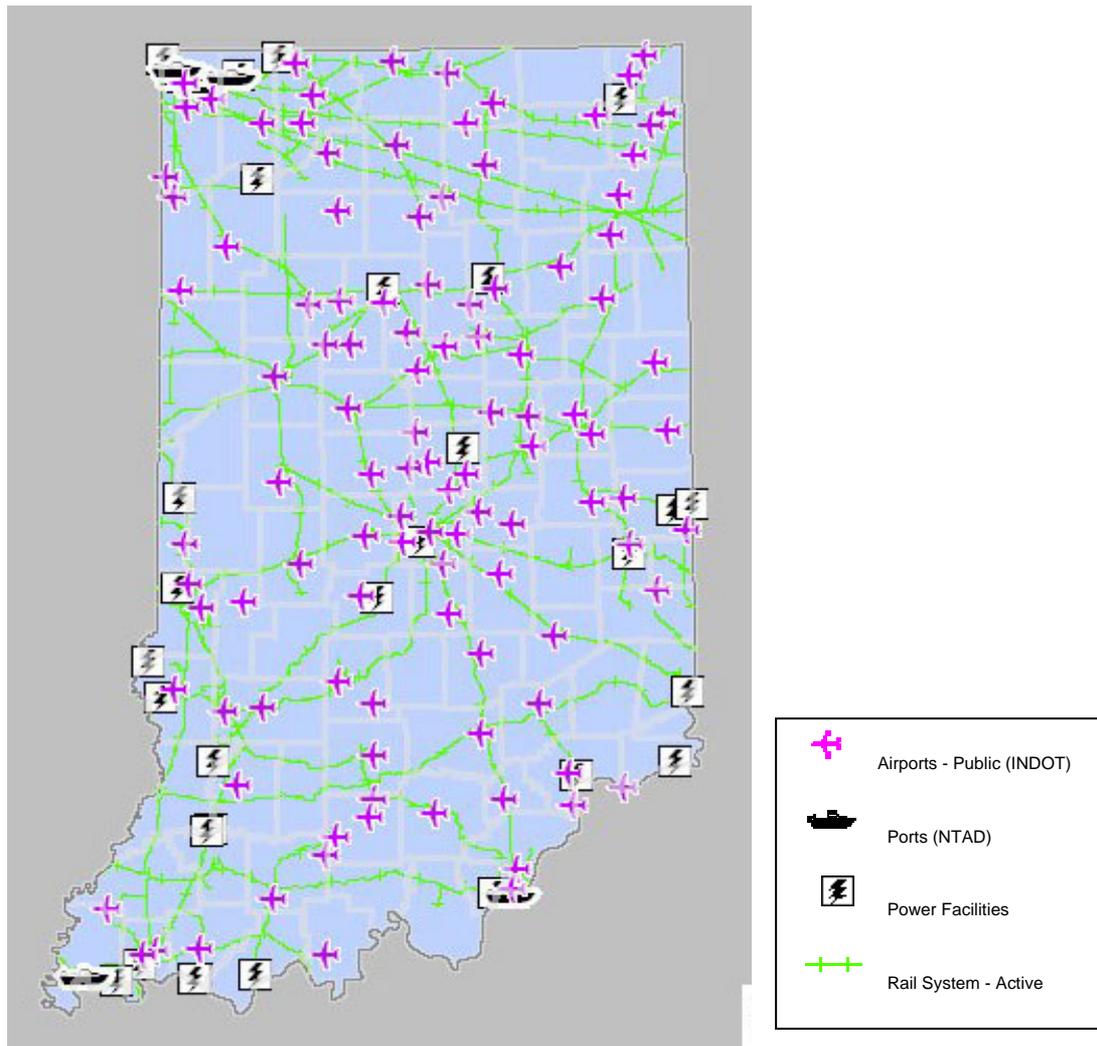
Highways - There is a reason Indiana is known as "The Crossroads of America." Seven (7) interstate highways converge in Indiana, more than any other state in the nation. The Indiana Department of Transportation manages a network of more than 11,000 miles (17,600 km) of federal and state highways. The state is an important location for truck terminals and warehouse centers. This is reflected in the density of truck traffic in the state. Indiana highways carry the sixth highest concentration of truck traffic and the highest for any urban or Eastern state.

INDIANA ROADWAYS





**INDIANA PUBLIC AIRPORTS, RAILWAYS IN USE,
PORTS AND POWER FACILITIES**



2.2.2 Railroads

Indiana is served by at least 37 freight railroads. The state rail network moves raw materials and finished goods to and from hundreds of Indiana customers and is part of the interstate rail system between northeast and western states and between the city of Chicago and the southeastern states. The State has approximately 4,255 miles of railroad track, of which 91 percent are operated by Class I railroads, principally CSX Transportation, Inc. (CSXT) and Norfolk Southern (NS).

Ninety of Indiana's ninety-two counties have direct rail service. Approximately 65 percent of rail freight moving in Indiana is bridge traffic—that is, interstate freight traffic that neither originates nor terminates in the state.



2.2.3 Ports

Indiana ships more than 70 million tons of cargo by water each year, which ranks us 14th among all U.S. states. More than half of Indiana's border is water, which includes 400 miles of direct access to two major freight transportation arteries: the Great Lakes/St. Lawrence Seaway (via Lake Michigan) and the Inland Waterway System (via the Ohio River). The state's three public ports are: Clark Maritime Center (Jeffersonville) on the Ohio River, Southwind Maritime Center (Mount Vernon) on the Ohio River and Burns Harbor (Portage) on Lake Michigan. This three-port system offers economical twelve-month access to 40 percent of the U.S. population across 22 states.

2.2.4 Aviation

The state has 114 public-use landing facilities. Of these, six are primary airports, six are reliever airports, 94 are general aviation airports, two are ultra-light flight parks, four are seaplane bases and two are heliports. The primary airports include one medium-hub, one small-hub airport and four non-hub airports. The world's leading air cargo and package services operate major facilities in Indiana, including Federal Express and Kitty Hawk.

Indiana's 51,306,885 square feet of paved runway provides more than \$4.2 billion in annual economic impact for our communities.

Indiana has five major airports with at least one runway measuring 7,100 feet or greater and capable of handling all types of the largest cargo-carrying aircraft: Evansville Regional, Fort Wayne International, Terre Haute International, Indianapolis International and Michiana Regional Transportation Center (South Bend). The state also has 10 additional airports with runways at least 5,500 feet and Instrument Landing Systems (ILS) capable of providing regular commercial freight service.

Indianapolis International Airport: Service from 18 airlines, with nonstop and direct flights to more than 100 destinations. Daily departures include more than 200 passenger airline departures and more than 50 airfreight departures.

2.2.5 Public Transportation

Indiana's 44 public transit systems include fixed route and demand response bus systems, including one commuter rail system (between South Bend and Chicago). The State's public transit systems carried over 31.5 million passengers in 2000, an increase of four percent from 1999. Transit system vehicles traveled 32.1 million miles in 2000, an increase of 3.5 percent from 1999.

2.3 Geography

The State of Indiana encompasses over 36,000 square miles and consists of diverse topographical areas from the Ohio River Valley to the Great Lakes Region. Much of northern Indiana is relatively flat and free of significant terrain issues. Multiple smaller lakes and wooded areas exist in the north; however, Lake Michigan offers much in the way of weather related emergency response scenarios. Many times throughout the winter season northwest and north central Indiana receive significant snowfall in the form of "lake affect snow".

Southern Indiana faces terrain issues with many of the southern counties having hilly terrain and densely forested areas. National and state forests limit access in winter, creating transportation and emergency response problems. Emergency services personnel operating in the south face icy conditions more frequently than snow.

2.4 Natural Resources

Diverse regions of the state of Indiana provide a broad base of natural resources from Lake Michigan on the north, to the Ohio River on the south. Large limestone deposits in south central Indiana provide many parts of the United States and Europe with limestone for use in construction of homes and buildings. The Salem Limestone was first quarried for building stone in southern Indiana in 1827. The basic principles of quarrying have changed little since the late 1800's when the building limestone industry came into prominence in Lawrence and Monroe Counties. Those counties produce the more familiar "Bedford Limestone", using similar



tools and equipment to those originally used; however, improvements over time now permit fewer men to quarry the same amount of stone. Once used mainly as structural building material for load-bearing masonry, Salem limestone currently finds most of its use as veneer or exterior cladding that protects, insulates, and beautifies buildings.

Most people recognize Indiana for its corn and soybean production, but very few realize the scope and economic importance of Indiana's forest industry. It may come as a surprise to learn that forests, which cover 20 percent of the state, contribute more than \$9 billion to Indiana's economy each year. The state ranks first nationally in the production of wood office furniture, wood kitchen cabinets and hardwood veneer, according to the [Indiana Department of Natural Resources \(IDNR\) Division of Forestry](#).

A wealth of coal occurs in the west-central and southwestern portion of the state in a large geologic structure known as the Illinois Basin. Illinois Basin coal originated from plant material that accumulated in tropical wetlands during the Pennsylvanian Period of geologic time (approximately 300 million years ago). For more than 150 years, the coal region of west-central and southwestern Indiana has undergone widespread mining. Underground (deep) mining was the dominant mining technique until the 1950s when the development of large-scale excavation and transportation equipment made surface (strip) mining more efficient. Annual coal production in Indiana exceeds 37 million tons.

2.5 Climate

Indiana has an invigorating climate with strongly marked seasons. Winters are often cold, sometimes bitterly so. The transition from cold to hot weather typically leads to a tumultuous spring with thunderstorms and tornados.

Floods occur in some part of the state nearly every year and have occurred in every month of the year. The primary cause of floods is prolonged periods of heavy rains, although rain falling on snow and frozen ground is a contributing factor. Average annual snowfall ranges from 14 inches in southwest Indiana to 76 inches in the north/central snow-belt region near Lake Michigan.

2.6 Risks & Vulnerabilities

2.6.1 Natural Hazards

Since 1990, 24 disasters have stricken Indiana, for which presidential declarations of emergency have been approved. The Indiana State Hazard Mitigation Plan addresses five natural hazards: flooding, tornados, straight line winds, earthquakes and winter storms.

Tornados

According to statistics compiled by the US Disaster Center, Indiana ranks number one in the nation for tornado risk. Indiana has an annual average of 23 reported tornados. Historically, tornados have occurred in every month of the year. On June 2, 1990, 37 tornados ripped through Indiana, the most on any one day in state history.

Earthquakes

On June 18, 2002, a 5.0 magnitude earthquake struck the Evansville, Indiana with an epicenter between Mt. Vernon and West Franklin in Posey County, in an area that is part of the Wabash Valley Seismic Zone. According to the Indiana University Indiana Geological Survey, while there was minor damage associated with the earthquake, the tremor was a warning to residents of the Wabash Valley Seismic Zone that earthquakes can, and do, strike close to home.

The Wabash Valley Seismic Zone is located in Southeastern Illinois and Southwestern Indiana and it is capable of producing 'New Madrid' size earthquake events. Seismologists and geologists from the U.S. Geological Survey, various universities in Indiana, and geologists of the Indiana Geological Survey are in



collective agreement that the Lower Wabash Valley of Indiana and Illinois is capable of producing large and damaging earthquakes at virtually any time.

2.6.2 Military Facilities

Both the Crane Naval Surface Warfare Center and the US Army Newport Chemical Weapons storage facility are located in Indiana. An accident or attack on either of these facilities would simply be catastrophic. The Newport Depot stores the chemical nerve agent VX, the deadliest nerve agent ever created. A drop the size of a pinhead, absorbed through the skin, can kill by severely disrupting the nervous system. Indiana workers began chemically neutralizing 1,269 tons of this deadly nerve agent late in the summer of 2004. Work continues on disposition of by product of the neutralization effort.

The Crane Naval Surface Warfare Center researches, processes and stores weapons materials such as projectiles, bombs, missiles, ammunition, and develops and tests chemical, biological and explosive detection equipment and systems. In the event of a disaster or attack, interagency, interoperable communications would be critical. Failure of one or more communication sites in these areas would be catastrophic not only to Indiana residents, but to those living in adjoining states.

2.6.3 Significant Events

Indianapolis is home to the world's two largest single-day sporting events, as well as the largest Formula One race in the world (the economic equivalent of hosting three Super Bowls in a single year). During each of these events, the state's population rises exponentially. The Indianapolis Motor Speedway is, capacity-wise, the largest sports stadium in the world. Average attendance at the Indy 500 race each year is 400,000. The Brickyard 400 attracts about 300,000 spectators and the Formula One race attracts another 200,000 visitors and fans.

Indianapolis is home to two professional sports teams: the Indiana Pacers and 2007 Super Bowl Champion Indianapolis Colts.

Since 1979, Indianapolis has hosted more than 400 national and international sporting events in Indianapolis, with an economic impact of over \$2 billion dollars. With the overwhelming success of these events, Indianapolis has gained the reputation as an amateur/Olympics sports capital.

Due to this reputation, Indiana is home to numerous national sports organizations, including the National Collegiate Athletic Association (NCAA); the Association of Governors' Councils on Physical Fitness & Sports; the National Federation of State High School Associations; the National Institute for Fitness & Sport; USA Gymnastics; USA Track & Field; U.S. Diving, Inc.; U.S. Rowing Association; U.S. Synchronized Swimming; the American College of Sports Medicine; the Black Coaches Association; and the International Institute of Sport, Science and Medicine.

Indianapolis will host the NCAA Men's and Women's Big Ten Tournaments for a five-year term beginning in 2008. With completion of the Lucas Oil Stadium in 2008, Indianapolis is a front-runner contender for events such as the Super Bowl.

2.7 Regions & Jurisdictions

2.7.1 Counties, Cities, Towns & Townships

There are 92 Counties in the State of Indiana. For more about Indiana counties, visit <http://www.indianacounties.org>

Indiana has 1008 townships with more than 3000 elected officials. Each township has a trustee and three township board members (Marion County township boards have seven members) who are elected to



serve four-year terms of office. For more on Indiana Townships, visit <http://www.indianatownshipassoc.org>

2.7.2 Other Regions/Districts

Departments of state government have regionalized operations throughout the state for many years. These operational groups include the Indiana Departments of Natural Resources, Transportation, Health, Indiana State Police and others.

Public safety communications, typically law enforcement, have for many years centered their dispatching and communications interoperability (as it was known) around the existing State Police district boundaries.

For purposes of planning for interoperable communications scenarios, regional working groups have formed in sectors of the state. These working groups are comprised of local, county and state communications personnel, sheriff's, chief's of police, state police and local/county communications managers to forge interoperability plans. Plans developed utilize the state police district boundaries and corresponding regional interoperable talkgroups and frequency plans.

2.7.3 Homeland Security Districts

Indiana's Homeland Security Districts were formed based on a series of criteria, including numbers of fire departments, state police posts, federal epidemiology representation requirements, time zones, and other criteria that reflected the current and future needs for homeland security. Since then, the local governments have adopted the districts, as have other state agencies, including the Indiana National Guard and Board of Animal Health. The districts will be used heavily in the future for initiatives such as District Planning Councils (DPC), District Response Teams (DRT), and Agricultural Surveillance and Emergency Response Teams (ASERT). Additional assessments and capability requirements for the districts will be performed in coming months to enhance district interoperability of resources.

2.7.4 Indiana UASI Regions

Indiana has one designated Urban Area, consisting of two central Indiana counties – Marion and Hamilton. IPSC has worked extensively with the Marion County Emergency Communications Agency (MECA) to collaborate and coordinate interoperable communications.

This plan incorporates the tactical communications plan that is in play in within the UASI area established in the state of Indiana. Elements of this tactical plan are incorporated into the SCIP directly, or by reference to ensure synchronization of the plans, and to elicit continued coordination between the groups.

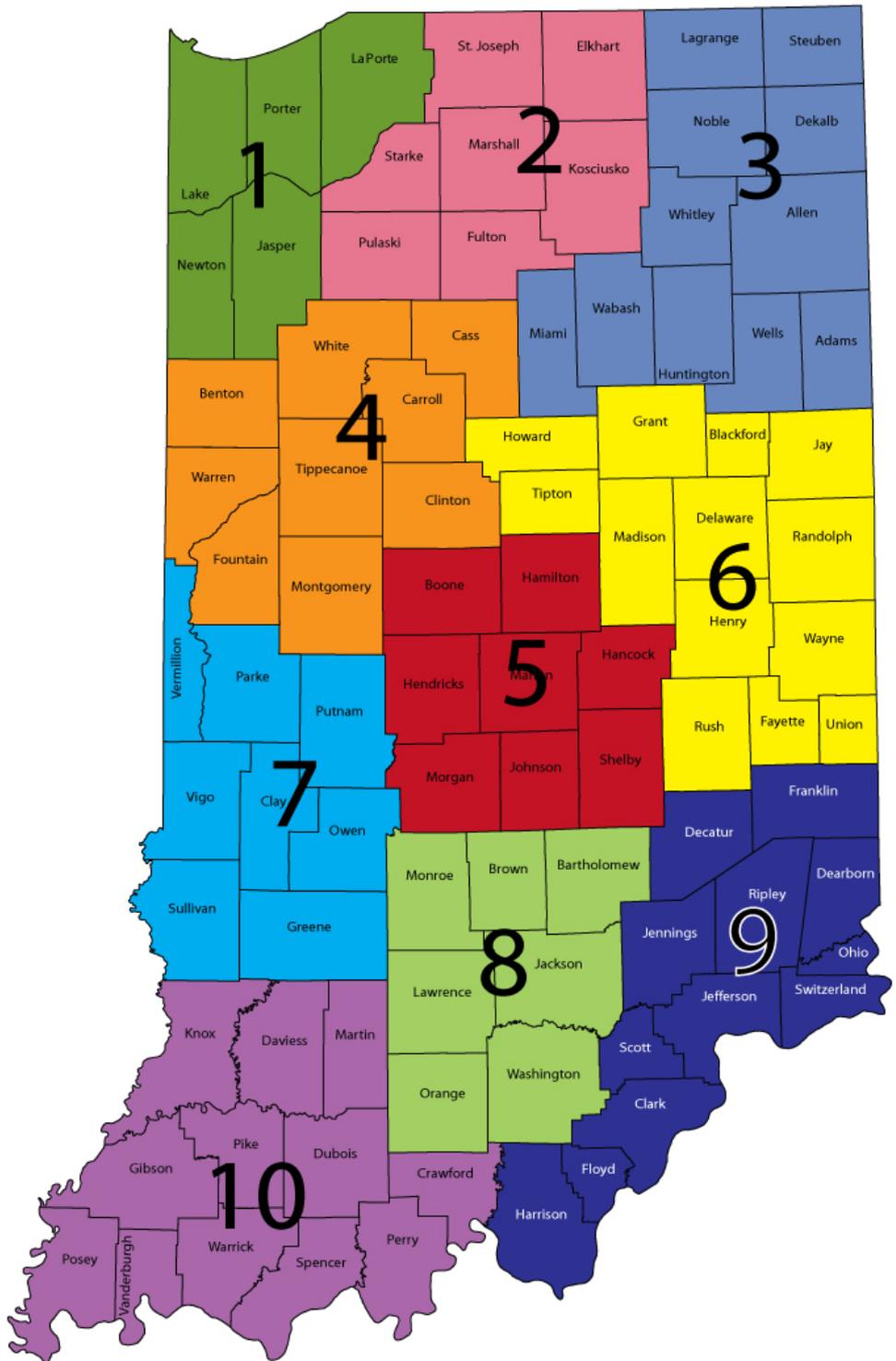
The tactical plan process contains an interoperability assessment component for measurement of the maturity of communications interoperability in a UASI, metropolitan area or region. The Department of Homeland Security (DHS) evaluates UASI interoperability plans and issues Tactical Interoperable Communications Scorecards that assess and evaluate Governance, Standard Operating Procedures (SOP), and Usage elements of the TICIP against the SAFECOM Interoperability Continuum. The ongoing reassessment of TICIP goals and objectives provide for the realignment or adjustment of these plans to compensate for identified scorecard deficiencies or unforeseen variances in the plans.

While not established in the state of Indiana as a UASI, northwest Indiana's Lake County participates with the City of Chicago in their UASI tactical interoperability communications plan. The City of Gary, along with other south lake shore communities has established protocols for communications interoperability.

During 2008, Indiana will begin discussions with the Chicago UASI to determine how best to incorporate Lake County (UASI) planning with the statewide plan. The Lake County Project Hoosier SAFE-T sites (4) provide countywide communications that, depending upon response protocols developed with Chicago UASI, will provide interoperable communications (NPSPAC) facilities for Illinois public safety first responders.



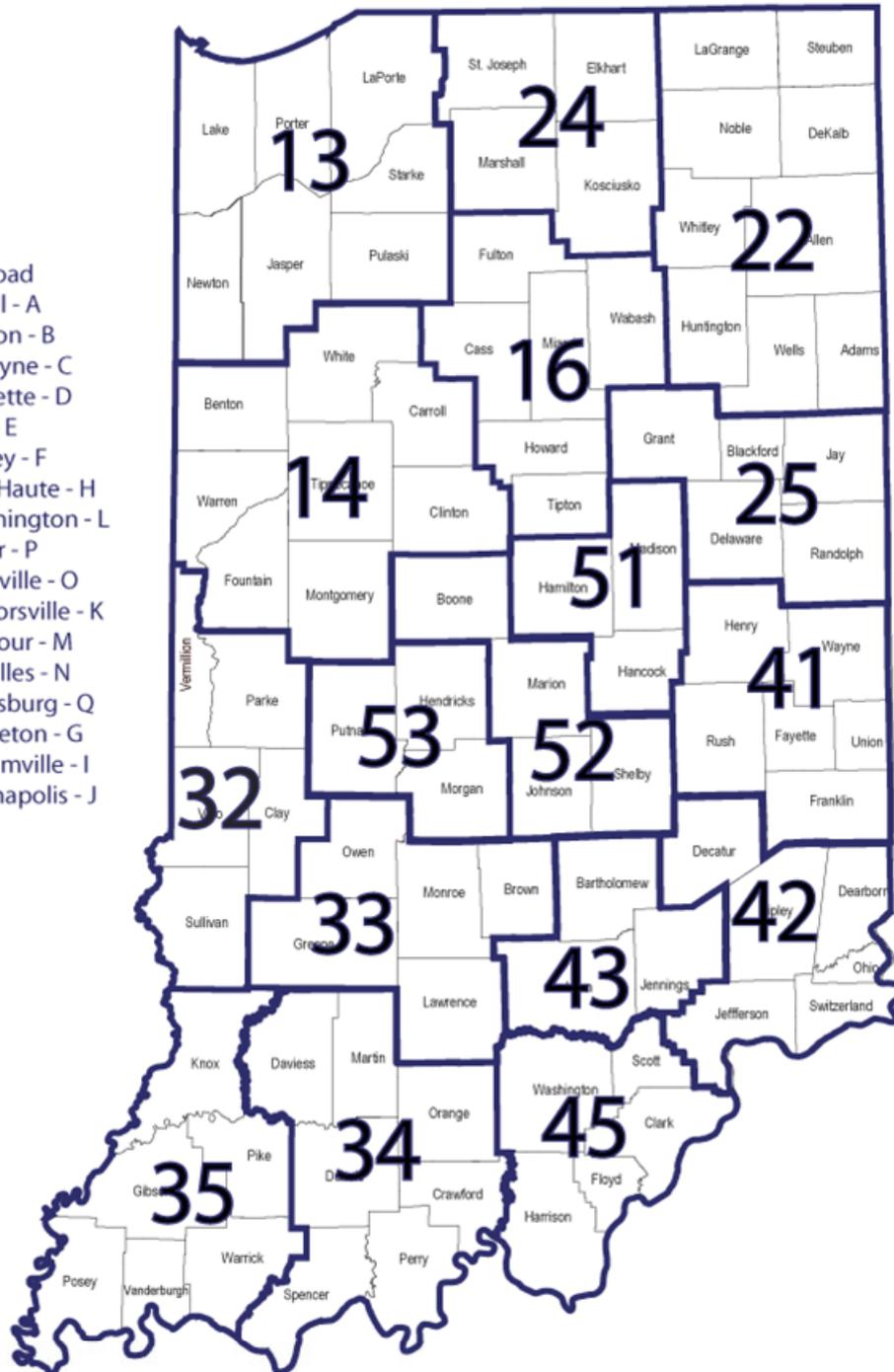
DEPARTMENT OF HOMELAND SECURITY DISTRICTS





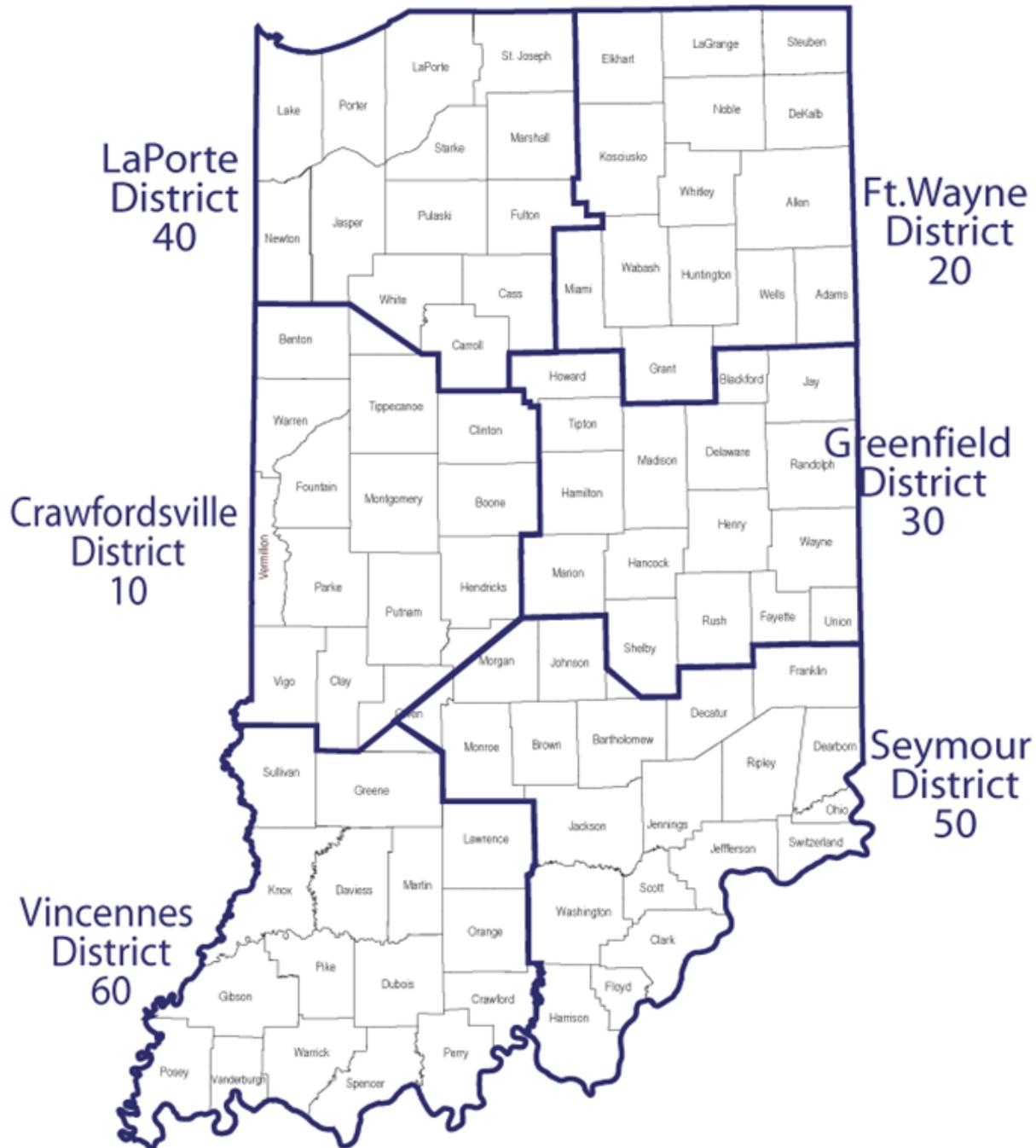
INDIANA STATE POLICE DISTRICTS

- 11 - Toll Road
- 13 - Lowell - A
- 24 - Bregon - B
- 22 - Ft. Wayne - C
- 14 - Lafayette - D
- 16 - Peru - E
- 25 - Redkey - F
- 32 - Terre Haute - H
- 33 - Bloomington - L
- 34 - Jasper - P
- 35 - Evansville - O
- 41 - Connorsville - K
- 42 - Seymour - M
- 45 - Sellersburg - Q
- 51 - Pendleton - G
- 53 - Putnamville - I
- 52 - Indianapolis - J





INDIANA DEPARTMENT OF TRANSPORTATION DISTRICTS





INDIANA DEPARTMENT OF NATURAL RESOURCES DISTRICTS





3 CURRENT STATEWIDE ASSESSMENT

SAFECOM's Interoperability Continuum illustrates the entire range of interoperable communications, from a minimal level on one end, to an optimal level on the other end.

While the core goal is to “move to the right” of the continuum, reality dictates a wide range of capabilities. The state fully recognizes that not all public safety entities can or will fully operate on the statewide interoperable communications platform. Thus, Indiana will achieve the maximum level of public safety communications interoperability feasible through cooperative efforts, regional planning, inter-agency standard operating procedures, training and exercises.

Strengths & Weaknesses

The SCIP Executive Committee assesses Indiana's current level of communications interoperability as follows:

STRENGTHS

Governance – At this stage, Indiana is well positioned in governance, with a statutorily established structure (Integrated Public Safety Commission) that represents the diverse range of public safety stakeholders across the state. Additionally, local and regional interoperability working groups establish interoperability plans and communicate those forward to the IPSC Commission.

Technology – While not “bleeding edge,” Indiana has made pragmatic technological progress with the buildout of a statewide interoperable communications system. The 800 MHz dual mode SmartZone network includes facility to insure support of legacy analog systems as well as digital mode operation.

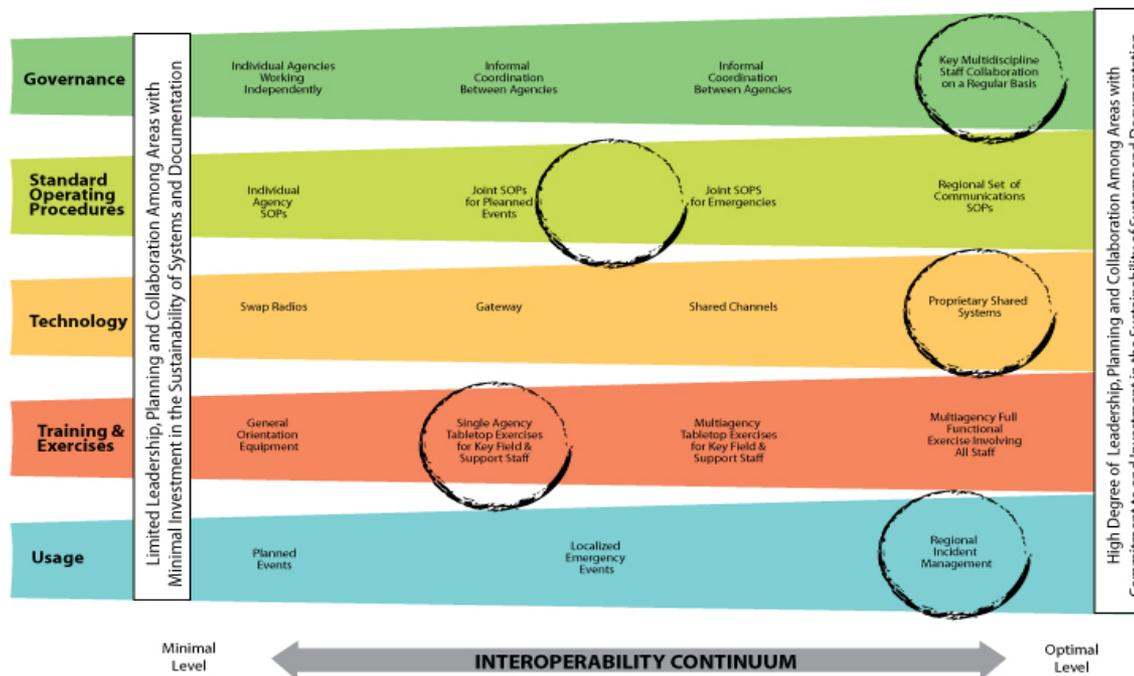
Usage – More than 30,000 users currently operate on the statewide radio system for day to day and emergency public safety communications. The system usage continues to grow with daily additions to the system database.

MODERATE PROGRESS

Standard Operating Procedures – The state of Indiana has well-established policies for statewide system use while locally developed SOPs for interoperable communications scenarios are established for use by regional consortia. Universal access and knowledge of these SOPs, however, is limited. The state will continue to work to develop and share Standard Operating procedures that foster interoperability and improve training and exercises for public safety officials throughout the state.

GAPS

Training & Exercises – The IPSC has been focused upon building and implementing a statewide interoperable communications system, and thus is in the process of transitioning from a construction agency into a “customer service” agency. Part of this transition involves strengthening the existing communication training and exercise programs and expanding web-based opportunities.



Indiana will continue to use the Interoperability Continuum to:

- assess current levels of interoperability at local and state levels
- identify additional gaps that need to be addressed
- facilitate interoperable communications and policies where optimal levels are not practical.

3.1 Governance

3.1.1 Governing Body - Integrated Public Safety Commission (IPSC)

The Indiana General Assembly established the Integrated Public Safety Commission in 1999. The IPSC is a state government agency, comprised of 12 Commissioners. A current staff ten (10) is responsible for design, development, procurement, implementation, maintenance and operations of the statewide interoperable communications voice and data system. The continuing mission is to manage and maintain the voice system and to look strategically at future enhancements to the voice system and deployment of future data integration, interoperability and technology.

3.1.2 Enabling Legislation

(IC 5-26-2-1) Enabling legislation provided for the creation of the Integrated Public Safety Commission as the group responsible for interoperable voice and data communications. Specifically:

“Sec.1. The integrated public safety commission is established for the purpose of promoting the efficient use of public safety agency resources through improved coordination and cooperation to enhance the safety of Indiana residents. As a first step in accomplishing this goal, the commission shall focus on establishing a statewide wireless voice and data communications system.”

Other key elements of the legislation provide for planning and coordination of responses involving public safety officials who wish to participate.... specifically:

“Developing coordinated, integrated responses to significant public safety events by those public safety agencies that choose to take part. Developing means of sharing information operationally and technologically to improve public safety.”



3.1.3 Commission Membership

The Integrated Public Safety Commission is comprised of twelve (12) members from a broad base of public safety and private industry. Membership includes:

- A sheriff, appointed by the governor.
- A chief of police, appointed by the governor.
- A fire chief, appointed by the governor.
- A head of an emergency medical services provider, appointed by the governor.
- A mayor, appointed by the governor.
- A county commissioner, appointed by the governor
- A representative of campus law enforcement, appointed by the governor
- A representative of the private sector, appointed by the Governor
- The superintendent of the state police department, who represents the State Agency Public Safety Committee.
- The special agent in charge of the Indiana office of the Federal Bureau of Investigation or designee
- An individual appointed by the speaker of the House of Representatives.
- An individual appointed by the president pro tempore of the Senate.

Not more than four (4) members appointed by the governor may be members of the same political party.

Current Commission membership includes:

- Chair: Paul E. Whitesell, Ph.D., Superintendent, Indiana State Police
- Albert Chen, Telamon Electronic Corporation
- Doug Cox, Office of Public Safety, DePauw University
- Randy Fox, DeKalb County EMS
- Thomas Fuentes, FBI Special Agent In Charge, Indianapolis Office
- Nick Gulling, Hancock County Sheriff
- Rick Gunselmann, Police Chief, City of Jasper
- Charles Henderson, Mayor, City of Greenwood
- Marla Irving, Allen County Commissioner, Ft. Wayne
- Richard Linenburg, President, Knox County E-911 Board, Vincennes
- William Newgent, Chief, Greencastle Fire Department
- Richard Worman, Former State Senator, Fort Wayne

3.1.4 Meeting Schedule

The Commission meets quarterly and as needed to review project progress, policies, procedures and resolutions, and fine-tune strategies for the technological and operational implementation of SAFE-T. The regularly scheduled meeting falls on the third Thursday of the month during the months of January, April, July, and October.

3.1.5 Subcommittees/Advisory Groups

The IPSC relies heavily on several advisory groups to provide targeted direction and/or operational experience.

3.1.5.1 State Agency Public Safety Committee

The SAPSC and the SAPSC technical sub-committee combine the knowledge and resources of state personnel in developing and implementing interoperable communications that satisfy the particular needs of state government. State agencies comprising SAPSC and its technical subcommittee are:

- Military Department of Indiana
- Indiana State Police Department
- Department of Environmental Management
- Department of State Revenue



- State Emergency Management Agency
- Department of Natural Resources
- Department of Transportation
- Department of Administration
- Department of Correction
- Alcohol and Tobacco Commission
- Indiana State Department of Health

3.1.5.2 IPSC Policy Sub-Committee

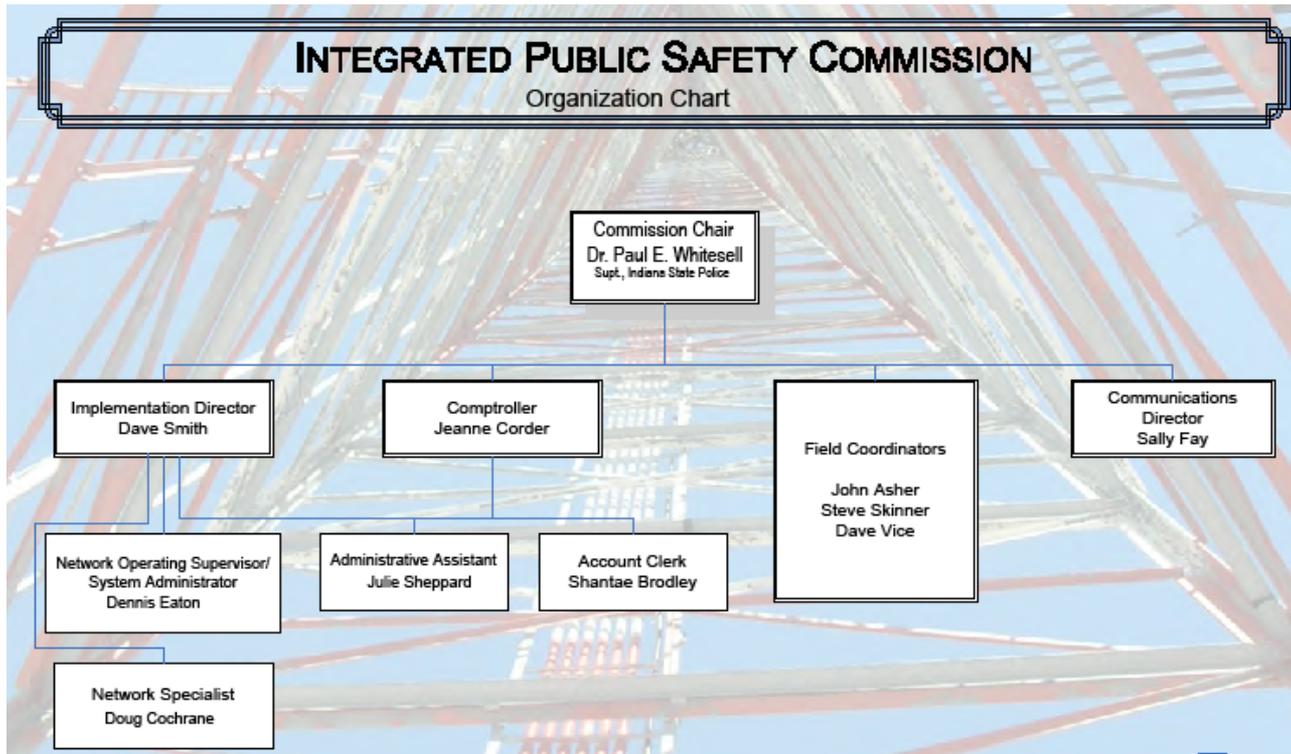
The IPSC Policy Subcommittee meets as required to develop and recommend operational policies to the Commission. Much of the ongoing work of the sub-committee is related to operational policies toward interoperability, statewide and regional interoperable talkgroup and communications planning. The members of the IPSC Policy Subcommittee include representatives of law enforcement, fire, 911, and emergency medical services. They work together to formulate sound policies regarding the use of talkgroups, system oversight and other technical areas. These policies are available on our website, <http://www.in.gov/ipsc/SAFE-T/policies/>.

3.1.6 Memoranda Of Understanding

The Integrated Public Safety Commission has completed negotiations and executed Memorandum of Understanding agreements with all 92 Indiana Counties. All local agencies including hospitals, universities, and EMS providers under contract with the local/county share access to Project Hoosier SAFE-T under negotiated MOU. Additionally, 15 state agencies, 4 federal agencies and other emergency services providers such as, aviation rescue and railroad transportation participate in Project Hoosier SAFE-T via separately negotiated MOU.



IPSC STAFFING CHART



IPSC GOVERNANCE: FLOW OF INFORMATION





3.2 Technology

A broad spectrum of technology exists throughout the state; a fact that complicates interoperability. The states' strategic direction is to facilitate and encourage as many public safety entities as possible to participate in the statewide 800 MHz SAFE-T system.

Although the use of Project Hoosier SAFE-T is widespread, public safety agencies across the Indiana continue to operate legacy systems in three frequency bands; 150MHz, 450MHz, and 800 MHz. Recognizing this continued use of VHF and UHF technology, the state has and will continue to encourage agencies to purchase 800MHz radios for use by incident commanders, police and fire command staff to facilitate interoperable communications during mission critical events. The Indiana Department of Homeland Security continues to place 800MHz radios in the hands of local communities, as a cache, for distribution to field personnel during interoperability scenarios or to further enhance day to day operational use of the statewide system.

Across the state, some local and county agencies that continue to use UHF, VHF and non-SAFE-T 800MHz systems have deployed gateway technology. Other agencies have purchased 800MHz radios, incorporating them into their communications consoles, in order to patch systems together for interoperable communication scenarios. Training and frequent practiced use of patching technology is critical, as these systems do require technical knowledge to implement.

The state will continue to encourage strategic partnerships similar to these, when differing technologies are merged to achieve interoperability.

The following large population service entities are programming radios with dual personalities, or integrating SAFE-T radios within their dispatch console to implement patching solutions for interoperable communications.

- Marion County (UASI) (Motorola) has directed that all radios be programmed to interoperate with SAFE-T radios;
- Tippecanoe County Sheriff and City of Lafayette;
- City of Fort Wayne and Allen County;
- Vanderburgh County (MACOMM) acquired and programmed SAFE-T radios for console integration;
- Terre Haute Police Department (MACOMM) is integrated with Vigo County (Motorola-SAFE-T) using gateway patching technology within their city/county consolidated dispatch center.

Infrastructure support for backhaul of public safety communications data and voice is, in part, through use of the Indiana State Police microwave system. To facilitate more bandwidth, expanded use of the microwave system is anticipated in the future. Strategically, the state is investing in increased capacity for the microwave network to facilitate backhaul facilities for SAFE-T and other data interoperable communications requirements which may result from expanded use of 700MHz and 800MHz.

While it is the stated "direction" of the state to provide a single interoperability platform, additional consideration must be given to achieving interoperable communications with users of other technologies.

3.2.1 Statewide 800 MHz System Statistics & Users

Currently, 34,000 user radios are registered in the SAFE-T system database. This includes first responders in all 92 counties, 17 state agencies (including 2300 state Department of Transportation workers; 1600 Corrections Officers; and 3500 State Police), and four federal agencies. Approximately 600 users take advantage of the SAFE-T mobile data capacity.

The SAFE-T system was designed for a large number of users. System capacity is for 65,000.

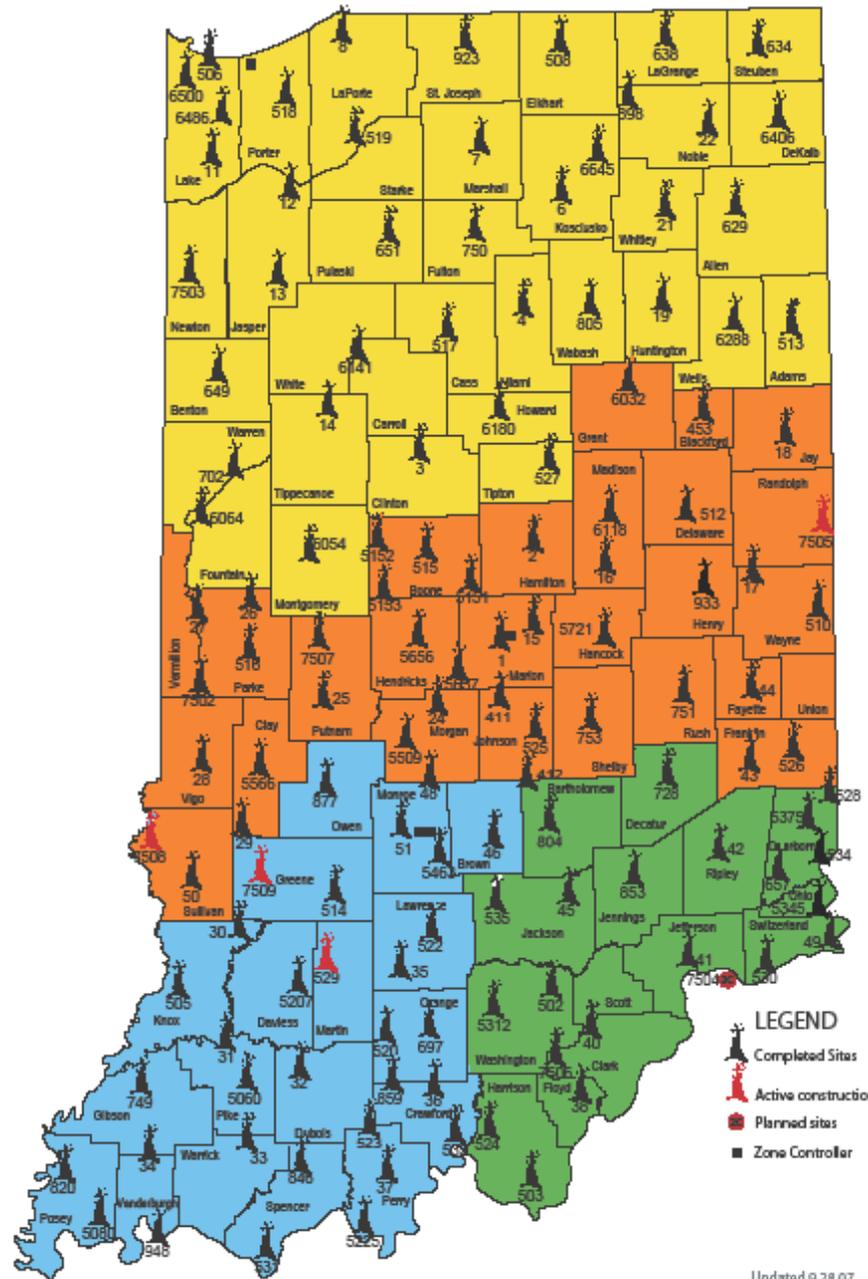


While some agencies have a radio or small number of radios in order to provide interoperable communications in the event of a natural or man-made disaster, a large number of agencies use the system for their day-to-day communications needs.

INDIANA'S STATEWIDE 800 MHZ SYSTEM



Project Hoosier SAFE-T Implementation Map





3.2.2 Other 800 MHz Systems

Other “standalone” 800MHz systems are in use in several Indiana counties. These systems consist of MA-COMM (EDACS), Motorola (Smart Zone, P25/6 and 7.x platforms), and Kenwood conventional. Those agencies using non-SAFE-T 800 MHz systems are:

- Indianapolis/Marion County, Metropolitan Emergency Communications Agency (MECA)
- Tippecanoe County
- City of Terre Haute
- Ft. Wayne/Allen
- Hamilton County
- Steuben County
- Vanderburgh County
- Howard County
- Cities of Hammond/East Chicago
- Indiana Department of Corrections

3.2.3 VHF systems

A large segment of public safety continues to operate using VHF spectrum and technology. Some of these agencies, while operating at some level on Project Hoosier SAFE-T, will continue to maintain their systems. Plans include upgrading existing VHF systems to digital in the longer term. Long term interoperability planning includes purchase of 800MHz radios for distribution to incident commanders and field personnel as available in concert with local/county government purchase of gateways such as ACU1000, Moto-Bridge or similar technology.

The state recognizes that users of existing VHF systems (older technology 25 kHz) are faced with a significant decision for migration to narrow band technology in the near future. As agencies begin to look at costs and infrastructure replacement, the state will facilitate migration to Project Hoosier SAFE-T as much as possible by providing grants to offset the cost of new radios.

3.2.4 UHF Systems

There are few UHF systems deployed throughout Indiana, existing plans call for continued use of these systems for the long term. Interoperability planning includes use of gateways, and use of 800MHz radios which have been provided to these counties/agencies through Homeland Security grants. Distribution will be to incident command personnel and field personnel as available.

3.2.5 700 MHz

Public safety use of the 700 MHz spectrum in the state of Indiana does not exist due to the use of spectrum by public broadcast stations. However, the state of Indiana is moving forward with plans to implement technology suitable for 700MHz spectrum when and if additional spectrum becomes available. Statewide frequency plan development is underway, with work being performed by the Region 14, 700MHz Planning Group. Detail planning includes both frequency allocation and operational policy development.

With the recent Second Report & Order, adopted August 10, 2007, the Federal Communications Commission appears to have finalized plans to create a nationwide interoperable 700 MHz broadband network for public safety.

Strategic planning discussions are under way to determine a “best approach” practice for the establishing statewide software architecture standards, voice frequency use planning, and potential infrastructure solutions.



Future implementation of 700MHz for narrow band voice continues to be linked to existing commercial television use throughout most of Indiana. As spectrum becomes available in February 2009, the state will begin to appropriately implement that statewide 700MHz voice channel plan for use statewide.

Indiana will continue to ensure that future purchases of technology will support interoperability with 700MHz spectrum. The statewide interoperable communication system is relatively new, that said; local, state, and federal agencies have purchased newer technology radios capable of operating on both 700 and 800MHz, with upgrade to Project 25 Phase II.

Legacy 800MHz technology regional systems do not have 700MHz capable subscriber equipment; but, with 800MHz rebanding in progress, many of those agencies anticipate purchasing upgrades to support expanded use in 700MHz in addition to their 800MHz system.

Nationwide 800MHz voice interoperability channels have been established, similar to others in the VHF/UHF spectrum. Since most radios capable of operating on 700MHz voice channels are, at a minimum capable of 800MHz; the 800MHz NPSPAC channels are designated as the interoperable communications channels for use in the state of Indiana.

3.2.5.1 700 MHz Interoperability Channels

While the 800MHz NPSPAC channels will be used by Indiana as the conventional means of interoperable communications, the plan includes the 700 MHz interoperable band plan for reference.

The narrowband voice & data interoperability channels (sixty-four at 6.25 kHz bandwidth) are defined on a nationwide basis. Appendix F shows the designation of these channels as defined by the 700 MHz National Coordination Committee (NCC). Since they are nationwide channels, each channel must have the same usage within each region and across regional borders. They have been sub-divided into different service categories.

The ANSI/TIA 102 Series standards (Project 25) are the Digital Interoperability Standard for the conventional-only mode of operations on narrowband voice and data interoperability channels.

There are 2 Calling channel sets and 30 Tactical channel sets. Channel sets are comprised of two 6.25 kHz channels each.

The Tactical channel sets are subdivided into the following categories:

Discipline or Use	Quantity
Emergency Medical Services	4
Fire Services	4
Law Enforcement Services	4
Mobile Repeater operation	2
Other Public Services	2
General Services	12
Data Services	1

Calling Channels

Because the 700 MHz band will be initially encumbered by broadcast television, two of the interoperability channels sets are reserved as "Calling Channels". The States will define when and where the two calling channels are to be used. These calling channels, which appear in the Table of Interoperability Channels (Appendix F) as "7CAL59" and "7CAL75" must be monitored, as appropriate, by licensees who employ interoperability infrastructure in the associated channel group. When calling channels are integrated into infrastructure, their coverage must at least match the coverage of the other



interoperability channels in the system. In addition to the usual calling channel functions, the calling channels may be used to notify users when a priority is declared on one or more of the tactical interoperability channels.

Tactical Channels

All Interoperability channels, except as described below, shall be used for conventional-only operation. Normally, users will 'call' a dispatch center on one of the "Calling Channels" and be assigned an available tactical channel. Deployable narrowband operations (voice, data, trunking) shall be afforded access to the same pool of channels used for similar fixed infrastructure operations. In the event of conflict between multiple activities, prioritized use shall occur

700MHz interoperability channel table is included as an addendum to this plan.

3.2.6 Mobile Data

Today, the use of mobile data is widespread throughout the northern 2/3rds of the state. Standalone mobile data systems (not integrated with SAFE-T mobile data) include VHF, UHF and 800MHz platforms.

During the system buildout, IPSC established a statewide 800MHz mobile data infrastructure parallel to the Project Hoosier SAFE-T voice system. Approximately 800 users routinely operate mobile data applications via the SAFE-T system. Strategically, the state envisions continued growth with use of the 800MHz SAFE-T system. As deployed the system will provide remote access to law enforcement databases through IDACS;; databases that include NCIC, Bureau of Motor Vehicles, NLETS –(access to other state law enforcement databases) and fire database information.

Other large mobile data systems include Marion County (MECA), City of Fort Wayne/Allen County, City of Mishawaka, Hancock; Monroe, Kosciusko, Marshall, Jasper, Whitley and others. While not typically interoperable, much work has been done toward integration of these systems via land based networks.

3.2.6.1 Data Systems Interoperability

The strategic direction of the state of Indiana is toward data interoperability through integration of disparate data systems statewide. Projects such as the recently completed integration of Project Hoosier SAFE-T mobile data infrastructure with the Marion County MECA (Marion County Emergency Communications Authority) mobile data system have been achieved. This initiative has resulted in bringing users from different counties, who share the same computer aided dispatch system, together via mobile data. In partnership with Marion County (MECA), two different mobile data systems integrate to provide shared access to a common data system; integration that has resulted in access to critical data for police, fire and EMS.

A group of four counties (Noble, Kosciusko, Whitley, and Wabash) in north central Indiana have implemented mobile data, each using a similar mobile data client which enables direct mobile device to mobile device interoperability. Other counties (Cass and Marshall) in north-west Indiana have implemented similar technology, each having the ability to interoperate with users statewide.

The state will continue to work toward breaking down the barriers to data integration by developing local/county and state partnerships between those interested in sharing and integrating data critical to public safety.

The state will continue to participate in data integration initiatives, enabling further data sharing and interoperability. As direction becomes clearer, consortiums will be formed to begin planning for architecture standards, and develop data sharing agreements.



3.3 Usage

Project Hoosier SAFE-T is the statewide interoperable communications platform for the state of Indiana. Hundreds of public safety agencies use Project Hoosier SAFE-T for routine day to day communications, with many others using it for emergency interoperable communications.

Interoperable communications scenarios occur daily. Legacy VHF, UHF and 800MHz users have purchased new radios or programmed existing radios to operate on the statewide system. The Integrated Public Safety Commission, through its' Policy Sub-Committee, has established interoperable communications talkgroups, enabled for the least capable radio affiliating with SAFE-T.

Support for non Hoosier SAFE-T users is planned for and supported through the use of radio caches and gateways. Additionally, legacy VHF and UHF users have implemented "patching" technologies, using SAFE-T radios in conjunction with their existing systems to facilitate interoperable communications. Agencies deploying patching/gateway technology include the City of Terre Haute, City of Evansville and Vanderburgh County, Military Department of Indiana, Hamilton County Sheriff's Department in Noblesville.

Portable gateways are deployed; however, agencies using this technology are also being encouraged to purchase 800MHz radios for Project Hoosier SAFE-T migration in the future.

Standard Operating Procedures have been developed for use in planning and executing interoperable communications scenarios, while local and regional operational planning is underway with the establishment of regional consortia who meet regularly for training and interoperable communications scenario planning.

Provisions for interoperable communications between systems are detailed below:

3.3.1 800 MHz Regional & Statewide Mutual Aid Channels

The State of Indiana has established both regional and statewide talkgroups to facilitate interoperable communications for 800 MHz users.

Regional: While not mandatory, the state encourages agencies to program their regional and surrounding regional interoperable talkgroups into their subscriber equipment. Three (3) regional interoperable talkgroups are assigned to each of 17 IPSC regions across the state.

The regional talkgroups are identified as (region)_MA1; (region)_MA2; and (region)_MA3. Programming regional interoperable talkgroups into subscriber (radios) enables first responders, within the multi-county area, to have a common/shared interoperable communications talkgroup within the radio with which to communicate to other first responders.

Agencies are encouraged to use the regional interoperable talkgroup (MA1) for broadcast of incidents that are considered "hot" calls, or other calls that may require assistance from multiple agencies operating within the same geographical area. Examples of "hot" calls that qualify for regional broadcast include: pursuits, personal injury crash, officer requesting aid or assistance, bank alarms, robbery in progress and any other emergency radio traffic deemed appropriate by the dispatcher or first responder in the field.

The ability for every public safety officer to receive these types of calls is critical. Agencies should not be hesitant in the use of MA1 for dispatch of these calls.

Regional Mutual Aid talkgroups are available for use by any participant in Project Hoosier SAFE-T; they do not belong to any one agency. The opportunity to use regional mutual aid talkgroups vary with the type of incident, number of responding agencies and varied services.



MUTUAL AID REGIONS

Region A	Region B	Region C	Region D	Region E	Region F
Jasper Lake LaPorte Newton Porter Pulaski Starke	Elkhart Kosciusko Marshall St. Joseph	Adams Allen DeKalb Huntington LaGrange Noble Steuben Wells Whitley	Benton Carroll Clinton Fountain Montgomery Tippecanoe Warren White	Cass Fulton Howard Miami Tipton Wabash	Blackford Delaware Grant Jay Randolph
A_MA1 A_MA2 A_MA3	B_MA1 B_MA2 B_MA3	C_MA1 C_MA2 C_MA3	D_MA1 D_MA2 D_MA3	E_MA1 E_MA2 E_MA3	F_MA1 F_MA2 F_MA3

Region G	Region H	Region I	Region J	Region K	Region L
Hamilton Hancock Madison	Clay Parke Sullivan Vermillion Vigo	Hendricks Morgan Putnam	Boone Johnson Marion Shelby	Fayette Franklin Henry Rush Union Wayne	Brown Greene Lawrence Monroe Owen
G_MA1 G_MA2 G_MA3	H_MA1 H_MA2 H_MA3	I_MA1 I_MA2 I_MA3	J_MA1 J_MA2 J_MA3	K_MA1 K_MA2 K_MA3	L_MA1 L_MA2 L_MA3
Assigning Agency ISP District #51 (765) 778-2121	Assigning Agency ISP District #54 (812)299 1151-	Assigning Agency ISP District #53 (765) 653-4114	Assigning Agency ISP District #52 (317) 897-6220	Assigning Agency ISP District #55 (765) 825-2115	Assigning Agency ISP District #33 (812)332-4411

Region M	Region N	Region O	Region P	Region Q
Bartholomew Jackson Jennings	Dearborn Decatur Jefferson Ohio Ripley Switzerland	Gibson Knox Pike Posey Vanderburgh Warrick	Crawford Daviess Dubois Martin Orange Perry Spencer	Clark Floyd Harrison Scott Washington
M_MA1 M_MA2 M_MA3	N_MA1 N_MA2 N_MA3	O_MA1 O_MA2 O_MA3	P_MA1 P_MA2 P_MA3	Q_MA1 Q_MA2 Q_MA3
Assigning Agency ISP District #43 (812) 522-1441	Assigning Agency ISP District #42 (812) 689-5000	Assigning Agency ISP District #35 (812) 425-2266	Assigning Agency ISP District #34 (812) 482-1441	Assigning Agency ISP District #45 (812) 246-5424

3.3.2 Mutual Aid Command & Control

As a mutual aid or interoperable incident is established (often long-term situations), and it is determined that extended interoperable communications is required, the agency with incident command shall request participating agency personnel to move to “the” Region Interoperable talkgroup MA2 or MA3, depending upon availability.

This migration to MA2 or MA3 is critical in order to free up MA1 for other interoperable traffic (particularly hot calls), and minimize channel usage at sites not required for communications.

NOTE: The use of this technology and the interoperable talkgroups does not alleviate the protocol for a dispatcher to contact other dispatch centers, by radio using point to point or inter-dispatch center console connection, or other methods (eg: phones), for requesting aid or assistance.

Statewide - In addition to regional interoperable talkgroups, statewide mutual aid talkgroups have been established for agencies (equipment capabilities considered) to program the statewide mutual aid



talkgroups into their radios as well. The statewide mutual aid talkgroups are identified as SW1 through SW10. SW 10 is designated as the statewide mutual aid calling talkgroup. The statewide plan encourages agencies to program dispatch consoles and RF Control stations, where possible, with these talkgroups. Mutual Aid policy requires dispatch centers to actively monitor SW10 for mutual aid assistance.



MUTUAL AID DISTRICTS

Indiana Statewide Mutual Aid Options

National
 NPSAC-Call
 NPSAC-TAC1
 NPSAC-TAC2
 NPSAC-TAC3
 NPSAC-TAC4
 NPSAC-TALK AROUND

IPSC Statewide Talkgroups
 SW_MA1 SW_MA6
 SW_MA2 SW_MA7
 SW_MA3 SW_MA8
 SW_MA4 SW_MA9
 SW_MA5 SW_Call

IPSC Regional Talkgroups

A = Lowell **J = Indianapolis**
 A_MA1 J_MA1
 A_MA2 J_MA2
 A_MA3 J_MA3

B = Bremen **K = Connersville**
 B_MA1 K_MA1
 B_MA2 K_MA2
 B_MA3 K_MA3

C = Fort Wayne **L = Bloomington**
 C_MA1 L_MA1
 C_MA2 L_MA2
 C_MA3 L_MA3

D = Lafayette **M = Seymour**
 D_MA1 M_MA1
 D_MA2 M_MA2
 D_MA3 M_MA3

E = Peru **N = Versailles**
 E_MA1 N_MA1
 E_MA2 N_MA2
 E_MA3 N_MA3

F = Redkey **O = Evansville**
 F_MA1 O_MA1
 F_MA2 O_MA2
 F_MA3 O_MA3

G = Pendleton **P = Jasper**
 G_MA1 P_MA1
 G_MA2 P_MA2
 G_MA3 P_MA3

H = Terre Haute **Q = Sellersburg**
 H_MA1 Q_MA1
 H_MA2 Q_MA2
 H_MA3 Q_MA3

I = Putnamville
 I_MA1
 I_MA2
 I_MA3





3.3.3 800MHz Interoperability with Non-SAFE-T 800 MHz Systems: NPSPAC

While the statewide interoperable communications system is a proprietary Motorola platform, the Integrated Public Safety Commission (IPSC) has implemented interoperability between existing non-Motorola 800MHz radio system throughout the state. Interoperability between disparate 800MHz systems is achieved through statewide deployment of NPSPAC (National Public Safety Planning Advisory Committee) 800MHz conventional channels.

By IPSC policy, radios operating on Project Hoosier SAFE-T are programmed with NPSPAC conventional Calling and Tactical frequencies.

Planning scenarios for local interoperability between the statewide SAFE-T system and agencies using non-Motorola system technology shall, at a minimum, require incident commanders to migrate from proprietary technologies to conventional NPSPAC. NPSPAC Call and Tactical Channels are listed below:

NPSPAC CALL & TACTICAL CHANNELS

TX (MHz)	Rx (MHz)	CTCSS	Channel Name
866.0125	821.0125	156.7Hz	NPSPAC Calling Channel
866.5125	821.5125	156.7Hz	NPSPAC TAC -1
867.0125	822.0125	156.7Hz	NPSPAC TAC -2
867.5125	822.5125	156.7Hz	NPSPAC TAC -3
868.0125	823.5125	156.7Hz	NPSPAC TAC -4

The following page contains a map, depicting Project Hoosier SAFE-T deployment of the NPSPAC system.



NPSPAC MAP

- Lowell ISP**
- Site 9 - Summit - CALL & TAC1
- Site 11 - Lowell - CALL & TAC 4
- Site 13 - Monon - CALL & TAC3
- Bremen ISP**
- Site 7 - Plymouth - CALL & TAC4
- Site 506 - Elkhart - CALL & TAC3
- Ft. Wayne ISP**
- Site 19 - Huntington - CALL & TAC3
- Site 513 - Decatur - CALL & TAC2
- Site 629 - Ft. Wayne - CALL & TAC4
- Site 634 - Angola - CALL & TAC1
- Lafayette ISP**
- Site 14 - Lafayette - CALL & TAC2
- Site 6054 - Crawfordsville - CALL & TAC4
- Peru ISP**
- Site 4 - Peru - CALL & TAC1
- Site 6180 - Kokomo - CALL & TAC3, TAC4
- Terre Haute ISP**
- Site 27 - Newport - CALL & TAC1
- Site 28 - Terre Haute - CALL & TAC2
- Putnamville ISP**
- Site 25 - Putnamville - CALL & TAC3
- Indianapolis ISP**
- Site 15 - Indianapolis - CALL & TAC1, TAC2
- Pendleton ISP**
- Site 16 - Pendleton - CALL & TAC3
- Redkey ISP**
- None
- Connersville ISP**
- Site 44 - Connersville - CALL & TAC4
- Evansville ISP**
- Site 30 - Edwardsport - CALL & TAC3
- Site 34 - Evansville - CALL & TAC4
- Site 820 - New Harmony - CALL & TAC2
- Bloomington ISP**
- Site 51 - Bloomington - CALL & TAC4
- Jasper ISP**
- Site 37 - Leopold - CALL & TAC4
- Site 697 - Paoli - CALL & TAC2
- Seymour ISP**
- None
- Sellersburg ISP**
- Site 40 - Henryville - CALL & TAC3
- Site 38 - Floyds Knob - CALL & TAC2
- Versailles ISP**
- Site 42 - Versailles - CALL & TAC3

For a map of all the SAFE-T sites, visit our website, www.in.gov/psoc/safe-t



NPSPAC - Conventional 800 MHz Set-up				
Designator	Transmit	Tone	Receive	Tone
CALL	821.0125	156.7	866.0125	156.7
TAC1	821.5125	156.7	866.5125	156.7
TAC2	822.0125	156.7	867.0125	156.7
TAC3	822.5125	156.7	867.5125	156.7
TAC4	823.0125	156.7	868.0125	156.7
Talk around	855.2375	192.8	855.2375	192.8



3.3.4 VHF Interoperable Communications/Mutual Aid Response

The Indiana Law Enforcement Emergency Network (ILEEN) 155.475MHz mobile frequency is dedicated to law enforcement emergency use. A national frequency set aside for use by each state, ILEEN is available for mobile use by all law enforcement in the state of Indiana. As a dedicated calling and mutual aid frequency, it is monitored by all Indiana State Police communications centers. Established for mutual aid purposes, rules governing its use require it be limited mutual aid and interoperability via the mobile frequency. Only the state police, licensed for base station (fixed) operation on 155.445MHz, maintain management control of these frequencies under license by the F.C.C.

Channel Name		Frequency (Mobile/Base in MHz)
ILEEN	Mobile	155.445/155.475MHz
Inner City	Base station – Base station	155.370MHz

Law enforcement agencies are abandoning use of ILEEN as migration to Project Hoosier SAFE-T becomes more wide spread. Users are required to establish contact with the state police communications center in the area for mutual aid assistance and communications between agencies.

The Inner-City frequency (155.370MHz) often referred to as “point to point” or “point” is dedicated to law enforcement voice communication inter-agency. This interoperable frequency is maintained/licensed by local and state police dispatch centers, but its use is limited communications between dispatch centers. Currently, there are 18 state police dispatch centers who maintain active inter-city frequency operation. Most agencies, even though operating on 800MHz, or UHF (450MHz) continue to maintain and support communications using the inter-city frequency.

3.3.5 Legacy Systems Communications (Fire/EMS/Hospital-IHERN)

Interoperability between fire, EMS, and hospitals is achieved using VHF and UHF frequencies.

VHF FIRE INTEROPERABILITY FREQUENCY PLAN

Frequency	Input	Tone	Description
154.37000			Statewide Fire
154.28000			Statewide Fire Mutual Aid
155.02500			Statewide EMA



UHF FIRE AND EMS INTEROPERABILITY FREQUENCY PLAN

463.00000	468.00000	136.5 PL	Ambulance to Hospital Med-1
463.02500	468.02500	136.5 PL	Ambulance to Hospital Med-2
463.05000	468.05000	136.5 PL	Ambulance to Hospital Med-3
463.07500	468.07500	136.5 PL	Ambulance to Hospital Med-4
463.10000	468.10000	136.5 PL	Ambulance to Hospital Med-5
463.12500	468.12500	136.5 PL	Ambulance to Hospital Med-6
463.15000	468.15000	136.5 PL	Ambulance to Hospital Med-7
463.17500	468.17500	136.5 PL	Ambulance to Hospital Med-8
462.95000	467.95000	136.5 PL	Ambulance to Hospital Med-9 (Dispatch-1)
462.97500	467.97500	136.5 PL	Ambulance to Hospital Med-10(Dispatch-2)

VHF EMS AIR AMBULANCE SERVICES

Frequency	Input	License	Type	Tone	Description
159.90000					PHI Statewide Mobile only
153.15500					PHI Statewide Mobile only
153.08750				156.7 PL	PHI Anderson
153.08750				156.7 PL	PHI West Lafayette
153.23750					PHI Indianapolis
153.16250					PHI N Vernon
155.20500		KWS502	BM	192.8 PL	Samaritan Medical Helicopter (Used all over the northern half of the state)
152.45750		WQFR305	FB		Clarian Health Lifeline Air Ambulance - Kokomo
153.01250		WQFR305	FB		Clarian Health Lifeline Air Ambulance - Terre Haute
155.16000				131.8 PL	Methodist Lifeline Indianapolis
157.60500	152.34500	WQEB719		210.7 PL	Memorial Med-Flight (St Joseph County)
158.22000				032 DPL	Air Evac Brazil
160.03500		WQCD342		032 DPL	Air Evac Washington/Davies County
460.50000		WPYF285		141.3 PL	Lutheran Air (Fort Wayne)



VHF HOSPITAL EMERGENCY RADIO, STATEWIDE EMS TO HOSPITAL

Frequency	Tone	Description
155.34000	186.2 PL	Anderson Community
155.34000	131.8 PL	Ball Memorial Hospital
155.34000	107.2 PL	Blackford Community
155.34000	118.8 PL	Bluffton Regional
155.34000	77.0 PL	Cameron Memorial
155.34000	186.2 PL	Community Hospital
155.34000	79.7 PL	Dearborn County
155.34000	114.8 PL	Elkhart General
155.34000	103.5 PL	Fayette Memorial Hospital
155.34000	103.5 PL	Goshen General
155.34000	151.4 PL	Hancock Regional Hospital
155.34000	123.0 PL	Henry Co Memorial Hospital
155.34000	179.9 PL	Indiana University Hospital
155.34000	91.5 PL	LaGrange County
155.34000	141.3 PL	Laporte
155.34000	167.9 PL	Marion General
155.34000	131.8 PL	Methodist Hospital
155.34000	156.7 PL	Michigan City Memorial
155.34000	141.3 PL	Parkview Huntington
155.34000	186.2 PL	Porter Memorial
155.34000	100.0 PL	Reid Memorial Hospital
155.34000	179.9 PL	Riley Hospital
155.34000	141.3 PL	Saint Anthony
155.34000	82.5 PL	Saint Johns Hospital
155.34000	118.8 PL	Saint Joseph - Mishawaka
155.34000	127.3 PL	Saint Joseph - South Bend
155.34000	146.2 PL	South Bend Memorial
155.34000	67.0 PL	South Bend Osteopathic
155.34000	88.5 PL	St Vincent's Elwood
155.34000	192.8 PL	St. John's Anderson
155.34000	118.8 PL	Wabash County
155.34000	162.2 PL	Waters Michigan City
155.34000	123.0 PL	Wishard Hospital

LOW BAND VHF/NATIONAL AMERICAN RED CROSS

Frequency	License	Type	Description
47.42000	KCI818	B	Statewide Operations
47.50000	KNJB330	BM	Statewide Operations
47.58000	KUC684	BM	Statewide Operations
47.62000	WPAK826	BM	Statewide Operations
155.29500	WPBZ573	M	Statewide Operations



3.3.6 UHF Interoperable Communications/Mutual Aid Response

The use of UHF spectrum statewide is uncommon within law enforcement and fire service throughout Indiana; however, hospitals and EMS services providers have deployed UHF on a larger scale. The state of Indiana has licensed a number of uses for UHF, particularly in the emergency medical services area. The following communities have operational UHF systems deployed.

- City of Gary
- City of Anderson /Madison County

Interoperability between UHF trunking and conventional systems is achieved via the National Interoperable Channels. Agencies utilizing UHF technology are urged to program these national standard frequencies in order to effectively communicate during interoperable scenarios. As per NIMS, Incident Commanders are to instruct responding agencies to switch to a NPSPAC Calling Channel for direction and future interoperable communications during mission critical events.

UHF NPSPAC CHANNELS :

TX (MHx)	Rx (MHx)	CTCSS	Channel Name
453.2125	458.2125	156.7Hz	NPSPAC Calling Channel
453.4625	458.4625	156.7Hz	NPSPAC TAC -1
453.7125	458.7125	156.7Hz	NPSPAC TAC -2
453.8625	458.8625	156.7Hz	NPSPAC TAC -3

Strategic interoperability between Project Hoosier SAFE-T users can be accomplished through the following methods: field deployed gateways, radio caches (programmed in each respective system), and integrated dispatch console gateways with radios.

3.4 Current Local, Regional and State Operating Procedures

The Integrated Public Safety Commission routinely adopts operational policy for use of the statewide interoperable communication system, Project Hoosier SAFE-T. As operations have matured, statewide interoperable communication policies have been established through Commission action, which governs statewide, regional and legacy systems interoperability.

While the states position is to allow local community autonomy for day to day operation on SAFE-T, certain policy related to interoperability, sharing of resources, infrastructure, co-location with existing community system etc., are clearly established by policy. IPSC has adopted the policies listed below. These policies are available on our website, <http://www.in.gov/ipsc/SAFE-T/policies/>

- [Agency Identifier](#)
- [Asset Inventory](#)
- [Database Administration](#)
- [Definitions and Acronyms](#)
- [EMS/Hospital Interoperability Talkgroups](#)
- [Interoperability Talkgroups](#)
- [Legacy Subscriber](#)
- [Network Management](#)
- [Preserving Resources](#)
- [Private Calls](#)
- [Radio Aliases](#)



- [Regional and Statewide Interoperability Talkgroups](#)
- [Security Groups](#)
- [T1 Circuit Order/Implementation Process](#)
- [T1 Connectivity](#)
- [T1 Restoration and Provisioning Services Priority](#)
- [Talkgroup Aliases](#)
- [Talkgroup Naming Conventions](#)
- [Talkgroup Limitations](#)

3.5 Current Training and Exercise Programs

The State of Indiana has a formal and very robust statewide training and exercise program managed by the Training Division of the Indiana Department of Homeland Security (IDHS). There are four key components to the program which serves to ensure that training is multi-disciplinary and provides for the appropriate certifications as maybe required by the various programs:

- State delivery of Federal Emergency Management Agency (FEMA) Professional Development/Advanced Professional Series (PDS/APS) courses and National Incident Management System (NIMS) courses;
- Residential training of first responders at training facilities under the National Domestic Preparedness Consortium (NDPC). The NDPC membership includes FEMA's Training and Education Division (TED), the Center for Domestic Preparedness (CDP) in Anniston, Alabama, the New Mexico Institute of Mining and Technology (NMIMT), Louisiana State University (LSU), Texas A&M University (TEEX), and the Department of Energy's Nevada Test Site (NTS);
- Coordination of in-state delivery of Department of Homeland Security (DHS) funded courses and;
- Development and delivery of state specific emergency management/public safety/WMD/Terrorism courses based on county and state needs assessment.

Each year IDHS hosts a statewide Training and Exercise Planning Workshop (TEPW) for personnel involved in creating training and exercise programs for local, state and federal governments. The workshop objectives include:

- creating a statewide multi-year integrated training and exercise schedule by coordination and identification of statewide training and exercise opportunities during the workshop;
- Homeland Security Exercise and Evaluation Program (HSEEP) "hands on" Toolkit training entering identified statewide exercise and training activities into an integrated calendar during the workshop; and
- determining training requirements based on a performance needs analysis.

The IDHS Consolidated Training Calendar is available on-line at <https://oas.in.gov/hs/training/public/calendar.do> and is searchable by discipline, topic and date to ensure that training opportunities throughout the state are easily located.

The Indiana Department of Homeland Security adopted the HSEEP model for all state and local exercises and mandates it's use for all federally funded exercise activities. All counties and local jurisdictions, including the Indianapolis Urban Area Security Initiative (UASI) region, are required to follow HSEEP standards in grant-funded exercises.

The state exercise requirements are also determined by the U.S. Army Chemical Stockpile Emergency Preparedness Program (CSEPP) exercise model and U.S. Department of Energy (DOE) Radiological Emergency Program, Federal Energy Regulatory Commission (FERC) exercise model. DHS captured many elements of the CSEPP model in its development of HSEEP standards.



IDHS, working in partnership with district and local representatives, drafted the Indiana Five Year Training and Exercise Plan, in 2006. This plan was reviewed and updated in 2007. IDHS uses a methodology that delivers approximately 70 FEMA Emergency Management Institute (EMI) and NIMS courses annually. All of these courses are multi-disciplinary courses, open to all first responder, first receiver and NGO partners which have a role to emergency/disaster response. Additionally, the State has conducted train-the-trainer courses for NIMS, HSEEP, Incident Command System (ICS), Law Enforcement Protective Measures (LEPM), Law Enforcement Response Actions (LERA) and Weapons of Mass Destruction (WMD) Awareness.

In the past 12 months, the state conducted four ICS train-the-trainer courses and has five additional ICS train-the-trainer courses scheduled during the FY08 training year. In addition, IDHS has conducted 12 ICS-300 level courses and 12 ICS-400 level throughout the state.

IDHS participates in the design, development and execution of five major full scale or functional exercises and five district level tabletop exercises each year, in addition to an annual CSEPP exercise, and a joint Indiana National Guard/Indiana department of Homeland Security WMD/Terrorism exercise driven by DHS and Defense Support to Civil Authorities requirements. Each major exercise is designed to include local/district and state agency partner participants.

3.5.1 The Muscatatuck Urban Training Center (MUTC)

MUTC is currently operational and routinely used to conduct homeland security training. The 180 acre reservoir and urban infrastructure consists of 68 major buildings including a school, hospital, dormitories, light industrial structures, single family type dwellings, a dining facility and administrative buildings totaling approximately 850,000 square feet of floor space. Additionally the training area includes an extensive underground utility tunnel system and over 9 miles of roads and streets. MUTC is a consortium of governmental, public and private entities that are pooling their unique capabilities in order to provide the most realistic training experience possible.

Exercise and use of the mobile Intelli-repeater site (MIRS) have proven its benefit. Typical use includes both trunking and conventional operation. Incident command directs use of the MIRS when deployed. If needed, the patching of VHF, UHF, 800MHz will be accomplished through the use of an integrated "gateway" device located in the MIRS. Given the most common frequency deployed statewide is NPSPAC, it is recommended that with the deployment of additional ,cache 800MHz radios, NPSPAC TAC 1, 2, 3 & 4 be used for various on scene activities.

Given the functionality and ease of deployment, Indiana's strategic plan for 2008 and 2009 is to make investment in a second mobile Intelli-repeater (MIRS).

3.6 System Funding – Present to 2019

The 2002 Indiana General Assembly, spurred in part by the 9-11 tragedy, authorized funding for a statewide interoperable communications system. No new funding source was created – funds are derived from certain Bureau of Motor Vehicle transactions. In addition to paying for site construction and radio equipment, these funds pay for all operating and maintenance costs. Annual maintenance, operation and technology upgrade costs are on budget for \$8 million. Non-reverting funding by the state Legislature for Project Hoosier SAFE-T is through 2019.

Local, county, federal and other state agencies participating purchase and maintain their communications subscriber equipment (radios, consoles, etc.) and local future enhancements beyond the SAFE-T baseline design.

This financing model has proven to be a frugal, practical way to deliver interoperable communications capabilities to the largest number of first responders for the least amount of money. Projected completion costs for the statewide system infrastructure buildout is \$81 million – approximately \$9 million under contract and significantly less than the amount other states are investing. This frugal approach has directed the IPSC



staff to seek alternative sources of funds to supplement short term gaps, alternatives that include federal earmarks, homeland security dollars, as well as forging partnerships with local governments and agencies.

Through 2006, the state has invested \$39.9 million. To date, (2007) approximately 40% of the build-out has been funded by federal sources.

The Indiana Finance Authority, through which IPSC receives approval for extended repayment of authorized debt, has approved expenditures to date:

- \$13,000,000.00 - debt level authorized
- \$9,534,000.00 - borrowed
- \$3,100,000.00 - payments being processed-12/06
- Total Construction Project Expenditures(anticipated June 07) – \$81,300,000.00
- Repayment of IFA debt by IPSC - March 2010

The difference has been funded by direct BMV operating funds to IPSC, and grant dollars.

Project Hoosier SAFE-T is an enormous project and has enormous benefits never realized before by Indiana. In implementing SAFE-T, the IPSC is continually working with its vendors and partners to avoid costs and minimize expenses while maintaining a commitment to first responders to provide them with a reliable and effective statewide communications system. Cost saving measures includes

- Leasing towers rather than constructing from the ground up
- Partnering with local governments for use their compound facilities and tower
- Creatively seeking funding, including federal grants and Homeland Security funds
- Re-engineering the original 187 site plan to a 126 site plan

The IPSC also has ensured that first responders joining SAFE-T save as well. The IPSC secured 20-25% off list price and negotiated fixed pricing for 7 years on communications equipment. In fact, if the IPSC vendor offers a lower price on first responder equipment anywhere in the United States, it must offer that price to Indiana first responders as well.

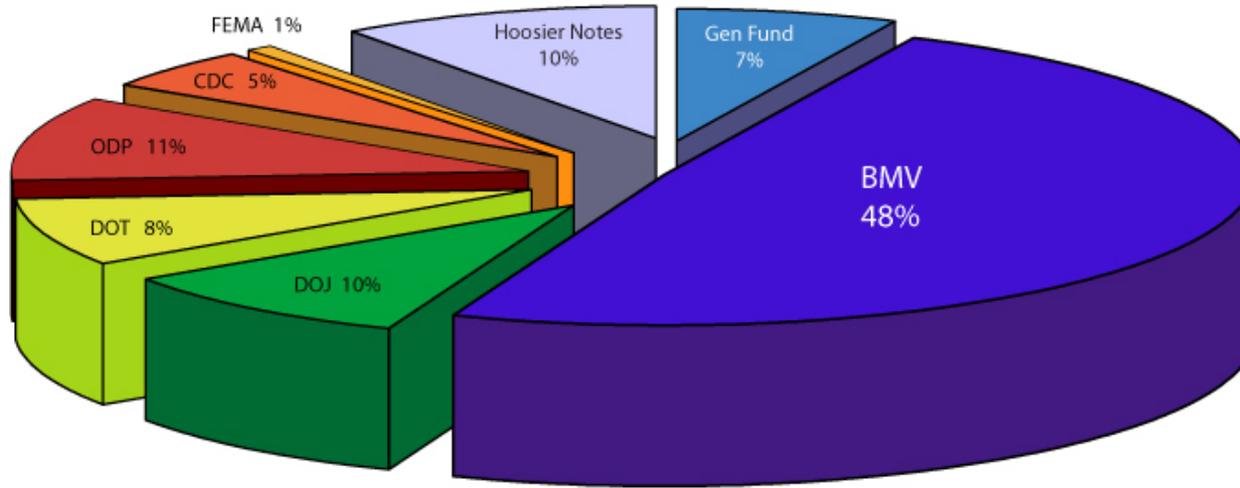
The wisdom of this approach secures SAFE-T system operation and maintenance costs well into the future. Funding is completely independent of grant monies which may or may not be available in future years



PROJECT HOOSIER SAFE-T SOURCES OF FUNDING

SAFE-T Funding

Chart composed with financial data ending November 2006



STATE SOURCES

General Fund - Original Allocation	\$6,709,092
BMV	\$46,989,340
Hoosier Notes	\$9,534,000

} 66%

FEDERAL SOURCES

DOJ	\$9,486,900
DOT	\$7,864,223
ODP	\$10,120,679
CDC	\$4,709,156
FEMA	\$909,556

} 34%

TOTAL: \$96,322,946



3.7 Existing UASI Areas/TIC Plans

One UASI district exists in the state of Indiana. The Indianapolis UASI consists of the following jurisdictions and agencies:

- Marion County Emergency Management Agency
- Hamilton County Emergency Management Agency
- Marion County Sheriff's Office
- Indianapolis Police Department
- Hamilton County Sheriff's Office
- Indianapolis Fire Department
- Cicero Fire Department
- Fishers Fire Department
- Marion County Health Department
- Health and Hospital Corporation of Marion County
- Hamilton County Health Department
- Indianapolis Mayor's Office
- Hamilton County Commissioners
- Hamilton County Information Technology
- Indiana Department of Homeland Security (advisory capacity)

In concordance with U.S. Department of Homeland Security requirements, the Indiana UASI has developed its' Tactical Interoperable Communications Plan (TICP).

The Indianapolis urban area used the "Allstate 400 at the Brickyard" auto race on August 6, 2006 to test and evaluate its' TICP. The Department of Homeland Security published the "Indianapolis Urban Area Allstate 400 at the Brickyard Car Race Tactical Interoperable Communications Plan (TICP) After-Action Report (AAR). (attach?)

Additionally, May 10 through May 13, 2007, first responders in the Indianapolis UASI participated in a three day full scale exercise that was the centerpiece of Ardent Sentry, a national level exercise designed to demonstrate the capabilities of local, state and federal responders during a disaster. During the simulation - a ten-kiloton nuclear bomb explosion – the local (UASI) responders were the first on the scene.

For further information about the Indianapolis UASI Tactical Interoperable Communications Plan, contact:

Greg Hall
Deputy Director of Marion County Emergency Management
Marion County Emergency Management Agency
47 S. State Avenue
Indianapolis, IN 46201
(317) 327-7504
PSH5254@Indygov.org

3.8 Multi-State Initiatives

Communications and interoperability between surrounding states continues to be an ongoing initiative for Indiana, Michigan, Ohio, Illinois and Kentucky. Beginning in 2002, these states initiated an informal consortium which became known as the Midwest Public Safety Communications Consortium-MPSCC. The initiative was dedicated to integrating each states' system within the confines of fiscal and technological consideration. The organization [created the first inter-state strategic direction for enabling interoperable communications](#)



Indiana and Ohio have truly “shared systems” technology. Indiana and Ohio have agreed to exchange “system key” files, which permit programming of radios and access to each states system. Planning and exercise of these state’s interoperability scenarios have been conducted between members of the Ohio National Guard, participating with Indiana National Guard and local first responders in a large scale disaster preparedness event.

The long term direction for Indiana and Ohio is to expand access capabilities at the state level, with further interoperability between cities and counties who share a common state border. Strategically, many communities in southeast Indiana who share access with Hamilton County, Ohio through existing mutual response agreements have dual programmed radios and indeed provide mutual aid response into Ohio. Hamilton County also provides mutual aid response in Indiana. They have programmed both Indiana and Ohio systems into their radios.

The states of Illinois and Michigan have deployed fully digital Motorola P25 radio systems statewide. National interoperability NPSPAC 800MHz channels are, by IPSC policy, programmed in all Indiana 800MHz user radios. State, county and local communities will interoperate with Michigan and Illinois, using the NPSPAC conventional channels.

Strategically, it is more difficult to interoperate with the State of Kentucky. The statewide interoperable radio system is fully digital, using UHF (450MHz) frequency spectrum. The state of Indiana will work toward achieving further interoperability through discussions with the state of Kentucky – with possible recommendations to include: deployment of controls stations at strategic dispatch centers along the Ohio River border, exchange of radio caches, or other gateway patching technology.

4 ONGOING INITIATIVES

4.1 **CASM Tool**

The State of Indiana conducted a system capabilities assessment as a part of the original interoperable communications statewide plan back in 1998. The interoperable communications landscape has understandably changed dramatically since then due in large part to the buildout and success of the statewide system. An updated and accurate portrait of the current systems in use across the state is a vital component in the effort to map a successful statewide communications strategy.

Indiana is using the Communication Assets Survey and Mapping (CASM) tool provided by the DHS/ Interoperable Communications Technical Assistance Program (ICTAP) to:

- Provide a single database containing all land mobile radio systems, other interoperability methods and how they are used by public safety agencies within an urban area or state.
- Provide a method to display the data.
- Provide tools to analyze the data and visualize interoperability gaps in accordance with the SAFECOM Interoperability Continuum framework.

Populating an accurate and comprehensive statewide system database which contains radio tower information, channels, repeater and agency contact information has proved to be a daunting task. Following are the steps IPSC staff has taken to achieve this task in a timely manner:

1. Using existing state public safety agency databases and FCC ULS listings, IPSC staff created a “master list” of existing agencies, towers, channels and repeaters.
2. This list was then sorted by county and forwarded to each of the county Emergency Management Agency directors for validation.
3. The validated data was sent to ICTAP (using their template fields) to populate the statewide database.



In addition to using the CASM tool to identify interoperability scenarios and gaps statewide, each county EMA will be able to use the tool to compile a county/regional interoperable communications plan as required by the Indiana Department of Homeland Security.

4.2 County Communications Plans

In conjunction with the CASM data population, Indiana is requiring each county to submit [a County Communications Plan](#). The required information is based on the Statewide Interoperability Planning Guidebook and mirrors the information found in the statewide SCIP. The state of Indiana will use these plans to gather information, to identify gaps and to ensure NIMS compliance.

The counties will use their plans to:

- Provide system users with an understanding of how to effectively communicate via county Public Safety Systems.
- Explain operability and how it is achieved on the system.
- Explain how the four criteria of interoperability are achieved on the system.
 - Inter-County Agency communication.
 - Task Force intra communication.
 - Mutual Aid Communication.
 - Training and Exercise.
- Provide Decision Makers and Managers with information necessary to make changes to the system and the procedures governing its use.
- Provide relatively easy methods to update the plan to accommodate changes in technology, population, governance, as they occur.
- Demonstrate NIMS compliance in terms of the Incident Command System (ICS) and preparedness

4.3 System Redundancy

Lessons learned from past disasters show that all communications systems, regardless of technological sophistication, are subject to compromise. Indiana is providing for communications redundancy in several ways:

4.3.1 Mobile Intelli-Repeater Site (MIRS)

The statewide network was designed to be very efficient -- each communication site is a vital component in the system. In order to provide the best wide-area, border-to-border coverage, the antenna systems are located on communications towers that are approximately 300' to 450'. Even though system engineering and design provides for a sophisticated back-up process, should one of these sites fail for any reason, first responders and the public they protect will be significantly impacted. Those first responders who normally affiliate with the unavailable site could be forced to communicate radio to radio, severely restricting their ability to communicate. In the event one of the communications sites should fail, or in the event additional coverage is needed, the State of Indiana has procured a mobile intelli-repeater site, a step which provides a critical role in saving lives, protecting property, and coordinating disaster and all-hazard operations.

The Indiana Department of Homeland Security (IDHS) also has a Mobile Command Center (MCC) with a 52-foot telescoping mast. The MCC's communications capabilities include:

- a satellite system for data and telephones;
- an integrated telephone system to provide cell, satellite or hard line capabilities;
- nine radio workstations to provide each of Indiana's designated response agencies with their own talk groups and mutual aid;
- a system to enable interoperability and additional capability for amateur radio operations.



Indiana is requesting an additional Mobile Intelli-Repeater Site as a part of the 2007/2008 Public Safety Interoperable Communications grant.



Mobile Intelli-Repeater Site (MIRS)

4.3.2 Satellite Radios

The Indiana Department of Homeland Security (IDHS) at present has at least 26 satellite radio/phones deployed throughout the state and mans a dispatch center with satellite radio/phone capability 24/7. By the end of calendar 2007, an additional 72 units will be deployed to additional IDHS staff as well as the Governor, Lt. Governor, Department of Natural Resources (DNR), Indiana State Police (ISP), Military Department of Indiana (MDI), Indiana Department of Transportation (INDOT) and the Indiana Department of Corrections (IDOC) and IPSC for use in the mobile intelli-repeater site (MIRS).

IDHS has plans in place to purchase and additional 122 units in Calendar year 2008, 92 of which are earmarked for each county's Emergency Management Agency. The remaining thirty units are intended to complete statewide coverage for state agencies.

In addition to purchasing satellite radio/phones, Indiana is actively encouraging participation in the IDHS talk groups by a number of quasi-governmental agencies such as public colleges and universities.

Thanks to a program initiated and funded by the Department of Justice in cooperation with our vendor, Mobile Satellite Ventures (MSV), Indiana will have access to a nationwide talk group free of charge in the event a need to communicate with federal officials or other state emergency management agencies arises.

IDHS conducts monthly test among all IDHS users and other agency users in order to insure user equipment is function and users are familiar with its operation.

When fully deployed, this system will provide the state with a backup communications system based on different infrastructure than ground based communications system.

4.3.3 Cached Radios

A strategic reserve of portable radios (150) 800MHz and satellite radiotelephones (26) is maintained by the state of Indiana. As required, these cache radios will be deployed for use as necessary to equip incident command personnel without interoperable communications equipment. The strategic reserve is maintained by the Department of Homeland Security, the Military Department of Indiana and the Integrated Public Safety Commission. The mobile Intelli-repeater site (MIRS) and mobile command centers, which are available for deployment, contain radios and gateway technology for integrating different radio systems. The MIRS is equipped with UHF, VHF (high and low band), 800 MHz for EDACS technology radios as well as conventional and trunking 800MHz Motorola technology equipment.



4.4 Web EOC

The state of Indiana is advancing data communications interoperability between the state Emergency Operations Center and its 92 counties via WebEOC, an all-inclusive disaster response data collection, collation and dissemination program. Currently in Indiana, County Emergency Managers submit data to the EOC via email, fax and telephone. This outdated process is slow, and at times inaccurate. This investment will greatly improve response capacity from the smallest communities on up to the state level. This software is widely used in the public safety community, including the Marion County Metropolitan Emergency Communications Agency (MECA) and the federal Department of Homeland Security.

4.5 Radios for Responders

The largest obstacle to the success of the SAFE-T system has been the cost of radios and associated equipment that must be borne by local agencies. Despite the huge savings realized by not having to pay user fees and not having to fund or maintain communications towers and associated equipment, local agencies are still hard-pressed to find funds to buy radios and other needed equipment.

The Indiana Department of Homeland Security has supported use of DHS grants and other federal funds to help locals buy equipment. For FY2007, Indiana is requesting an investment of \$1.4 million to directly supply local responders with 800MHz radios. Distribution would be targeted within ten key counties in Southern Indiana: Crawford, Floyd, Gibson, Harrison, Perry, Pike, Posey, Spencer, Vanderburgh and Warrick. These counties border the Indiana/Kentucky state line, which is defined by the Ohio River. Annual precipitation in southern Indiana can top 46" leading to a bloated Ohio River and frequent severe flooding.

An aggressive upgrade of 800MHz technology is underway by state and local agencies as some longer term users of the statewide radio system upgrade their subscriber equipment. These entities have determined their equipment to be surplus and will be making it available to other public safety agencies not yet operating on the statewide platform.

4.6 Enhanced Wireless E911 Project

In 2001, the Indiana Wireless Advisory E911 Board (IWAB) became aware that certain technological advances could provide Indiana with a more effective and efficient Wireless Enhanced (WE911) call delivery system. The features of this new technology:

- provide fewer points of system connection, resulting in fewer disconnected E911 calls
- enable faster call set-up times, resulting in expedited emergency service response, reduced costs of operation and service, improved quality of service, and more standardized availability of E911 service
- allow PSAPs to better prepare for future call delivery system advances
- provide the ability to quickly and efficiently transfer misrouted E911 calls
- provide state-wide WE911 call accounting and incident management
- increase WE911 call delivery system reliability and disaster recovery

Phase G-1 became known as project Crossroads and construction began in May of 2005. Crossroads consolidates WE911 calls from the 11 wireless carriers serving the state, and began operation in January, 2006. By July, at least one wireless carrier per county had converted to the Crossroads network. By December, all wireless carriers had converted to this new high availability fully redundant network.

Parallel with project Crossroads, INdigital was also developing phase G-2 of the wireless direct project. This network, called the IN911 network, uses secured Ethernet over SONET transport on a dedicated, private space fiber network. IN911 is a high availability IP based packet network that has multiple layers of redundancy, and self healing/automatic re-routing capabilities. When connected to the IN911 network, all Indiana PSAPs will have a private broadband network serving their public safety needs. The base purpose of the network is for WE911 and associated ALI information that will provide the wireless subscriber information to the PSAP.



4.7 Increase System Performance/Capacity

The statewide 800 MHz interoperable communications network allows a large number of public safety professionals to efficiently share a limited number of resources (frequencies). Original system design assigned from 3 to 12 channels (frequency pairs) to each site – channels which are shared by all users of a given site. As a rule, this allotment has been adequate both for day-to-day system use and also during emergency situations. In larger metropolitan areas, such as the Indianapolis UASI region, heavy system use during a large event can – and has - strained these resources.

To alleviate this problem, IPSC is expanding the number of channels at ten sites in three central Indiana counties (Boone, Hendricks and Johnson). The 2007 Indiana winter blizzard shows the need for this upgrade. By 5 p.m. on February 13, 2007, nearly half of all Indiana counties declared emergency conditions or travel restrictions. High winds, blowing and drifting snow, accumulations of more than a foot of snow, ice and other winter precipitation caused very dangerous conditions border to border across Indiana. From February 12-15, the statewide 800 MHz system handled 1,481,677 group calls. Total system performance was excellent. Less than 1% of all these calls hit a "busy." The sites where channel upgrades are being performed, however, experienced almost 4% "busies," a number that may seem small but is, in fact, extremely important to the first responder in the field who doesn't get through on the first attempt.

4.8 Local/State Cooperation

Strategic growth of Project Hoosier SAFE-T, as the states interoperability platform, has occurred with local and county communities constructing additional communications sites for integration with SAFE-T.

Three (3) additional sites were added in Boone County to increase coverage and provide additional interoperable communications capability not only in Boone, but adjacent counties.

Hendricks County constructed an additional site in Plainfield, adding to coverage provided by the Danville site. To facilitate interoperability with their neighbors to the north, Hendricks County funded additional radio channels for each of the Boone County system radio sites.

The City of Bluffton, and Cass County contributed to the growth of SAFE-T by constructing radio towers and compound facilities upon which SAFE-T equipment and buildings reside.

Other counties are planning similar upgrades toward improved interoperability. St. Joseph County plans include a four (4) site addition to the existing site in South Bend. Marshall County is considering a site in western Marshall County for improved coverage and interoperability with neighboring Starke County. Vigo County recently received a significant grant which will be used for construction of a SAFE-T radio site in Terre Haute for improved in building coverage.

The state of Indiana continues to work toward interoperable communications by providing technical and engineering support to local communities. In 2008 and 2009 the state will build five (5) additional sites for concentrated coverage improvements throughout the state.

4.9 800 MHz Rebanding

Indiana is in the "First Wave" of states required to submit a plan and accomplish rebanding efforts. In order to accomplish rebanding for the state of Indiana (Project Hoosier SAFE-t users), approximately 30,000 radios and the associated infrastructure equipment for each of the communications sites must be assessed to determine whether they must be retuned, reprogrammed or replaced in order to operate using the newly allocated frequency pairs.



As the license holder for all SAFE-T radio sites statewide, the Integrated Public Safety Commission is serving as an information/resource for local Indiana agencies forced to relocate to a different spectrum. In addition to helping locals with inventories, Project Hoosier SAFE-T staff has hired an experienced consultant, EMR Consulting to manage the massive migration of state Project Hoosier SAFE-t infrastructure as well as programming, replacement and upgrade of all subscribers. EMR Consulting is a Hoosier company, which has been providing Wireless Communications Consulting Services all across the country for 15 years.

4.10 National Incident Management System (NIMS) Compliance

Beginning in FFY2005 the State of Indiana Department of Homeland Security selected an individual from the planning staff to be the state lead for NIMS and NIMCAST activities. In 2005, the state created NIMSCAST accounts for all 92 county level Emergency Management Agencies and set a goal to have all first responder agencies, Emergency Support (ESF) lead, primary and support agencies sign into the NIMSCAST with their own account under their respective county. During the Indiana Emergency Management Alliance (IEMA) 2005 conference and the Indiana Voluntary Agencies Active in Disaster (INVOAD) executive meetings, the state held a seminar outlining NIMS compliance activities and urged all agencies and organizations to: 1) sign into the NIMSCAST to become NIMS compliant.

In FFY 2006 more than 1600 accounts were generated and of those Indiana had 100% submittal from the agencies. Some political jurisdictions submitted a single account that represented several agencies combined. It was urged from the state that for the next year each individual agency have an account unless the agencies were relatively small. (i.e. A city marshal or county DOT with less than 5 or 10 people). The State of Indiana has no recognized Tribal Nations so activities are limited to state and local agencies.

Submittal of accounts by agencies traditionally is done at the very end of the year allowing time to complete activities to meet eligibility requirements. The peak of submittals is usually the last week before the deadline of September 30th. This year the due date lands on a Sunday so the state has determined Friday the 28th as the states rollup submission. Until that time the level of compliance by the individual agencies cannot be determined.

Last years "baseline" required agencies to complete questions with no judgment if the answers revealed deficiencies. This year's FFY 2007 questions include requirements for a series of "Tier 1" activities which must be "answered in the affirmative" to be eligible for funding. Some agencies have been reluctant to complete the submittal until all the Tier 1 activities can be met to avoid filing a Corrective Action Plan (CAP). To date, only three CAPs have been filed in the State of Indiana.

To support the activities for the NIMS and NIMCAST, the NIMS state lead maintains liaison with the agencies directly and indirectly thru the field coordinators. Several newsletter articles have been created for the statewide publications promoting NIMS and encouraging the use of the NIMSCAST. Indiana Homeland Security staff attended several meetings in the field with local agencies, district meetings and conferences promoting NIMS protocols and the NIMCAST. A second temporary staff member was hired for the last half of the fiscal year. FFY 2006 and 2007 making proactive contact with NIMCAST account administrators to energize, encourage and trouble-shoot activities on a one-to-one basis with each account as needed. One-on-one meetings have been made with the majority of state agency NIMS account administrators to guide them thru the process.

The Indiana Department of Homeland Security Training Division has continually encouraged and promoted NIMS training through the online 700, 800, 100 and 200 NIMS courses thru EMI. The Training Division has held 58 ICS 300 level and 23 ICS 400 level courses. These courses are in addition to those not sponsored directly by IDHS. . The Training Division created a 100-400 level Train-the-Trainer course to sustain training independently at the local level with 3 courses offered in FFY 2007. The Indiana Homeland Security Website includes State and local approved NIMS training opportunities at:

<https://oas.in.gov/hs/training/public/calendar.do> and a comprehensive NIMS page at:
<http://www.in.gov/dhs/3533.htm> which contains several direct links to Federal NIMS WebPages and documents.



4.10.1 Emergency Support Functions

In accordance with NIMS and the National Response Plan, Indiana has adopted fifteen State Emergency Support Functions (ESFs) to support for interagency coordination during all phases of incident management. Each ESF is comprised of a Primary Agency and Supporting Agencies which coordinate activities and carry out missions within their area of responsibility. As such, the Integrated Public Safety Commission is designated as the Primary Agency for ESF #2 – Communications. The purpose of ESF 2 is to collect, analyze, and share information regarding potential or actual emergencies or disasters and to enhance the state's response and recovery functions.

Communications are maintained through the IDHS EOC using the newly implemented WebEOC, boosted through eleven statewide sites with connectivity to the SAFE-T network. This entire Statewide Network is tested every Wednesday. Local jurisdictions are requested to ensure Primary Police/Fire/HAZMAT frequencies are pre-programmed into their Local 800mh First Responder equipment.

4.11 Public Safety Interoperable Communications (PSIC) Planning

The 700 MHz block of 24 MHz of spectrum conditionally allocated to public safety in 1998 is targeted to be available throughout Indiana when the incumbent TV broadcasters vacate it in February 2009. Indiana does not currently license 700MHz channels for local use due to existing commercial/public television broadcast use.

Indiana's share in the Public Safety Interoperable Communications (PSIC) grant will significantly enhance our ability to further interoperability statewide. Investment justification for use of PSIC funds for data interoperability and planning are critical to the states direction for expanded data sharing and planned deployment of infrastructure in support of that objective.

Fortunately, Indiana's investment in Project Hoosier SAFE-T utilizes voice radios which are both 800 MHz and 700 MHz capable. Further investments in these radios – putting them directly in the hands of the first responders who need them – will deliver tangible results will be to locals who need immediate help. Long-term benefits are evident as well since the radios are adaptable as Indiana migrates to changing technology.

5 OUR VISION FOR THE FUTURE

Indiana will continue to build upon its' foundation, and using the gaps identified during the SCIP formation process/SAFECOM interoperability continuum, will strengthen the interoperable communications environment throughout the state.

- Expand the interoperable communications network to all public safety agencies statewide.
- Provide a common understanding of communications interoperability throughout the state of Indiana
- Provide on-demand training for interoperable communications
- Coordinate local, state, and federal public safety resources; tear down agency and geographical boundaries; and foster cooperation between police, fire, EMS, and other Hoosier first responder and public safety agencies.
- Continue to shrink the "system of systems" by encouraging migration to the state SAFE-T interoperable communications network
- Mirror the successful locally driven strategy to create a vision for next generation integrated data communications.



▪

5.1 Governance Initiatives

5.1.1 Formally Identify Interoperability Coordinator

In order to firmly establish interoperable communications as a high priority initiative, the federal Department of Homeland Security recommends that each state employ a full-time interoperability coordinator. Indiana has already established a statutorily designated agency - the Integrated Public Safety Commission – charged with leading interoperable efforts between agencies. As such, the IPSC Implementation Director has served as the statewide coordinator of all interoperable communications efforts. In order to formalize this role, however, the SCIP Executive Committee recommends that the Governor issue an executive order creating the position of Interoperable Communications Coordinator with duties that include:

- Produce and update the statewide Communications Strategic Plan which analyzes current interoperable communications capacity and establishes the vision for future coordination and cooperation.
- Coordinate initiatives, communicate information, and promote discussion regarding interoperability efforts in the state of Indiana and the Federal Government.
- Advance the interests of the Governor as well as the interests of Indiana's local first responder and public safety communities, advocating the local user-driven approach for solving communications interoperability issues.

5.1.2 Establish Data Interoperability Governance Structure

The SCIP Executive Committee also recommends that the governor establish by executive order a committee to explore data sharing solutions. This committee will be composed of representatives from all disciplines and public safety and will be charged with investigating technology and coordinating local involvement in next-generation interoperable communications plans.

5.1.3 Formalize Wireless Communications Policy Academy Executive Team as SEIC

Given the broad base of public safety responders who participated in the Wireless Communications Policy Academy Executive Team, it is recommended this group be charged with continuing efforts toward developing and participating in activities designated for the State Executive Interoperable Communications group. Currently, several committees function in support of the Integrated Public Safety Commission for operational recommendations to achieve interoperable communications statewide. Consideration may be given to re-directing their efforts to the SIEC who would report directly to the Commission with operational and policy recommendations.

5.2 Technology Initiatives

Next Generation Interoperability

With its first mission – a statewide system for interoperable voice communications – nearly accomplished, Indiana is ideally poised to move into the next generation of public safety communications: integrated public safety data sharing. The highly successful Project Hoosier SAFE-T process provides an ideal model for the kind of grass-roots coordination that must drive the discussion to create a public safety data integration and sharing framework.

Public safety information integration and sharing is essential to improving the quality and effectiveness of local, county and state justice systems. Integrated information technology can significantly diminish the unknowns that threaten first responders and the people they serve. Access to information, including thorough, complete criminal history records, improves officer and public safety. Police, prosecution, court, and corrections officials make more informed decisions when they have timely access to useful data. Public health, environmental and geographic data are key components of effective disaster plans and response.



The PSIC grant will provide significant help toward planning for data sharing and integration projects statewide. In order to maximize local participation in the development of a plan for next generation interoperable communications, Indiana will establish INdata – Indiana Data Architecture Technology Alliance - as a formal committee within IPSC to coordinate, create and blend varied data information networks into a functioning and unified whole.

5.2.1 Formalize statewide strategy for 700MHz/Public Safety Interoperable Communications (PSIC) initiatives

INData is the state of Indiana initiative for development of statewide integrated data architecture standards from which a statewide infrastructure plan will evolve. The need for a platform from which integrated justice data may be exchanged statewide is critical. Wireless technology requirements are emerging with deployment of statewide computer aided dispatch for public safety becoming a reality within the next two years. Through INData, the state will begin the process of defining wireless approaches that include use of 700MHz. Although much of the broadband frequencies, previously thought to be available for local and statewide data infrastructure buildout, will not be available the state may pursue wideband and narrow band voice channels suitable for data.

5.2.2 Indiana Data Architecture Technology Alliance - INData

Data sharing between state and local government is critical to reducing the cost of government. The formation of a group to establish data sharing and integration statewide is in its' initial phase. INData will develop policy for data integration, establish data architecture policy and begin to integrate various public safety/criminal justice data sharing statewide. This initiative is underway with executive sponsorship at the highest levels of state government.

Much work has been accomplished toward achieving data interoperability at the state level. Architecture planning has led to the development of statewide vehicle crash records, electronic ticketing system. Standards have been adopted by the Indiana Criminal Justice Institute, Indiana Supreme Court-Judicial Technology and Automation Committee.

5.3 SOP Initiatives

The Integrated Public Safety Commission has established policy regarding operation and use of the statewide interoperable communications system. These policies are intended to facilitate best practices for sharing system resources, while providing tools for achieving interoperability between users of SAFE-T, and legacy VHF, UHF and non SAFE-T 800 MHz systems.

The North Central and Southeast regional working groups are establishing interoperable communications standard operating procedures; procedures that direct inter-agency communications response, use of statewide and regional interoperable communications talkgroups and gateway patching solutions.

The SCIP Executive Committee recommends that regional user groups, as well as the statewide user group, continue to address Standard Operating Procedure issues during their regularly scheduled meetings. While local in nature, any establish procedure(s) should be forwarded to the IPSC staff for consideration and recommendation to the Commission for statewide deployment.

Additionally, the state Department of Homeland Security is requiring all counties to submit a County Communications Plan, which will contain details regarding inter-agency communication within counties; task force intra communication; and mutual aid communication.



5.3.1 Establish an online repository for SOPs

While Standard Operating Procedures and policies exist statewide, there is no single place for first responders to access this information. Indiana will use the CASM tool as well as the new content management state web system to gather and provide access to these SOPs.

5.3.2 Transit Systems, Intercity Bus,, Ports, and Passenger Rail Operations.

Interoperable communications plans are being developed by county and local public safety communications coordinators. Local transit systems and school corporation bus facilities are part of the local evacuation plans, and are to be included within the county and local communications plans to be submitted to the Indiana Department of Homeland Security in 2008.

The Integrated Public Safety Commission staff is in planning discussions with the U.S. Coast Guard for development of interoperable communications scenarios that will support operations on the southern Lake Michigan and the Ohio River.

Rail services in Indiana have negotiated interoperable communications agreements with the Integrated Public Safety Commission. Railroad police agencies have radios associated with the statewide system and operate daily using the system.

The state envisions including non-governmental bus services within the planned initiative to involve more non-governmental entities within SAFE-T interoperable communications planning scenarios.

5.4 Training Initiatives

5.4.1 Develop Web-based Training/Certification Program

The newer radios used on the 800 MHz system are actually computers, and learning to use such advanced technology can be daunting. In order to maximize use of the SAFE-T system, the SCIP Executive Committee recommends the development of web-based and CD-ROM tutorials, handouts, and point-of-use items to help Hoosier first responders use the communications equipment more effectively. A web-based training application would be the most cost-effective and time saving method to deliver on-demand SAFE-T system training to users.

Indiana will use a portion of its PSIC grant funds to create this program.

Regional Exercises

The IPSC will participate in regional interagency, cross-discipline interoperability exercises based on DHS exercise guidelines on at least a biennial basis. These exercises may be elements of larger exercises conducted by one or more of the Districts of the Indiana Department of Homeland Security. Training will include deployment of cache radios, necessary programming changes at the incident site, deployment of the mobile Intelli-repeater site (MIRS) and use of regional, statewide and NPSPAC interoperable talkgroups and frequencies (CALL, TAC 1, 2, 3, and 4).

5.5 Usage Initiatives

5.5.1 Common Language

The wide range of proprietary radio "lingo" in public safety agencies across Indiana remains a barrier to true interoperable communications. The gap in law enforcement "10 Codes" is legendary, and is reason enough to address this critical communications issue. In Indiana, however, the issue takes on increased importance since the statewide platform is used by all public safety agencies, not just law enforcement.



For example, if the Newport Chemical Depot in west-central Indiana experienced a spill of the deadly VX Nerve agent, the fallout would be catastrophic and would require response from multiple agencies and jurisdictions. For the Indiana State Police, a Signal 7 message translates to “serious emergency.” To the Terre Haute Fire Department, the Signal 7 message translates to “All Units Return to Station.” Clearly, such discrepancies can lead to chaos.

Indiana communications strategy is to abandon National 10-codes, state police codes and proprietary dispatch lingo and to adopt plain language speech communications in compliance with National Incident Management System (NIMS) requirements. To accomplish this goal, Indiana will create a task force to research and implement a common language protocol with the input of local first responders.

The Common Language Task Force will:

- Perform research and solicit comments and input from local agency personnel
- Draft a policy statement detailing the Common Language Radio Protocol
- Distribute the protocol statewide to stakeholders for comment and review
- Develop a web-based training program as well as integrated training within the Indiana Department of Homeland Security Training Division.

The Common Language protocol will be implemented state-wide by year-end 2010.

5.5.2 Encourage migration to the statewide system while allowing legacy systems to serve out their useful life.

The Indiana Department of Homeland Security has placed a priority on helping local agencies migrate to the newer, interoperable technology. Communications equipment purchased with grant money must be SAFE-T system compliant. Local agencies are free to remain on legacy systems if they so wish, but will not receive state or federal grant money to support these aging, standalone systems. Additionally, the state is requiring local grant applicants to use the Indiana Grants Management System (iGMS) along with the Emergency Management Capability Assessment to determine eligibility.

Regarding the all or none category for scoring, Sub-grantees will be docked one/half point for each missed grant deadline including budgets, quarterly reports, and BSIR submissions.

5.5.3 NIMS Compliance

Indiana is committed to reaching the goals and deadlines targeted in the NIMS guidelines:

STATEWIDE NIMS IMPLEMENTATION

Requirement		Requirement	
Adopt NIMS	94%	Complete ICS-100	80%
Promote NIMS	98%	Complete ICS-200	81%
Use ICS for all hazards	97%	Incorporate NIMS into exercises	94%
Establish NIMS baseline	71%	Use exercises to evaluate NIMS implementation	76%
Use DHS funds to coordinate preparedness & response activities	98%	Participate in multi-discipline/jurisdictional exercises	92%
Update plans, checklists and SOP's	83%	Incorporate corrective actions and lessons learned into plans and procedures	94%
Promote interagency and interstate mutual aid	98%	Inventory response assets	76%
Complete IS-700	85%	Achieve interoperability in accordance with national standards & guidance	94%
Complete IS-800	71%		



5.5.4 Renew Commitment to MPSCC

The state of Indiana will, through its' partnership with surrounding states, work toward renewal of the Midwest Public Safety Communications Consortium. Established initially in 2002, the group of stakeholders from Indiana, Illinois, Michigan and Ohio came together in an effort to unite for interoperable communications. Much work was done to develop a workable Memorandum of Understanding outlining specific on inter-state interoperability. Each of the member states agree this effort should be renewed.

5.5.5 Establish Statewide User Group

To facilitate implementation of the statewide interoperable communications plan, the State will encourage and facilitate growth of the statewide user group. Currently, two large regional groups exist. These groups meet regularly to discuss operational communications needs and interoperable communications plans. Counties participating in this group today are: Jennings, Decatur, Ripley, Jefferson, Ohio, and Dearborn in southeast Indiana. The northwest and central Indiana counties participating in the 2nd regional working groups are: Cass, Miami, Howard, Kosciusko, Whitley, Wells, Adams, Noble, and Marshall.

As growth in the southwest and south central counties the state will initiate similar working group. The state envisions these groups joining in a statewide effort within the next two years.

5.5.6 Use CASM to maximize system penetration/agency involvement

Once the state of Indiana has fully populated the CASM database, individual public safety agencies will be able to access and use the graphical interface to plot interoperable solutions and scenarios. Additionally, the CASM tool, in concert with CAM graphical presentation of communications resources, will provide planners with detailed information regarding placement of systems (VHF, UHF, and 800MHz) gateways, and other interoperable platforms that will provide more seamless interoperable communications.

5.5.7 Web-Based Information Sharing

In addition to the CASM database, the State of Indiana is in the process of converting to a content management web system. This kind of system provides for layered permissions, meaning that IPSC can control access to certain users to view and add content. Indiana will use this web technology to establish an online "one stop" information resource to allow jurisdictions to share resources among mutual aid partners.

5.5.8 Maximize Amateur Radio User Community

In times of emergency the amateur radio community plays an integral part in providing extended interoperable communications statewide. To that extent, the Indiana Department of Homeland Security (IDHS), through its' Emergency Operations Center, bring into play RACES members, and other volunteer amateur radio organizations, including ARES, MARS, CERT and EmComm, who support critical communications between first responders and local communities. While the majority of local Emergency Management Agencies have amateur radio support teams in place, IDHS (with support from DHS) is encouraging those local EMA's that presently do not have an active amateur radio support team to establish one. IDHS has supported permanent amateur radio stations at both the state and local levels with grants to purchase equipment.

Many amateur radio support team members have been cross trained to operate various public safety radios in the advent of a critical incident. In addition, a recent FCC ruling now permits public safety employees with amateur radio licenses to utilize their amateur radio privileges during a critical incident while on duty. This allows state and local governments to leverage their communications recourses during critical incidents. For example, during the recent Ardent Sentry exercise conducted in Indiana, the State RACES Team and IDHS Communications staff jointly operated the communications section of the IDHS



Mobile Command Vehicle as a seamless operation. Indiana will continue to expand integration of radio amateur technology partners with public safety interoperable communications.

In order to further maximize the communications capabilities of the amateur radio community, Indiana, through IDHS, is sponsoring an effort to arrive at a set of “recommended” common standards and protocols for all RACES Teams throughout the state. While part of the plan is to agree upon uniform frequencies for voice communications, and to incorporate radio to Internet to radio techniques, such as EchoLink and IRLP, special emphasis is being placed on the development of digital and unattended communications techniques that will allow messages to move to any EMA in the state automatically.

5.5.9 Expand Non-Governmental/Private Sector Involvement

Numerous non-governmental organizations are involved in the protection of Indiana citizens. Presently, these NGO's include, but are not limited to: hospitals, volunteer fire response, utilities, Amateur Radio Emergency Services (ARES), Radio Amateur Communications Emergency Services (RACES) and transportation entities. They are involved through public meetings and workshops, media and public awareness efforts, legislative outreach and collaborative activities with partners and stakeholders.

The needs and value of the NGOs will continue to be addressed with increased involvement in future statewide interoperability conferences, regional user groups and other outreach initiatives. Additionally, the state of Indiana is requesting a portion of its PSIC funds to use for the expansion of amateur radio operator involvement in emergency recovery efforts.

5.5.10 Annual Interoperability Conference

Creating an opportunity to meet with and discuss critical interoperable communications issues is critical to building partnerships and relationships between agencies. To foster growth and expanded participation in statewide interoperability, the Integrated Public Safety Commission staff routinely participates in regional interoperable communications working group meetings.

In June of 2008, the state of Indiana (Integrated Public Safety Commission) will conduct the first annual statewide public safety interoperable communications conference. The conference will bring together representatives from the statewide radio system user community, partner legacy systems operators and users and VHF/UHF community. The Conference will be the opportunity to introduce non-governmental entities to the public safety interoperable communications community. The state fully recognizes the need to involve non-governmental entities, who provide auxiliary support in times of critical incident management.

The Annual Conference will present a platform for roll out of the Statewide Communications Interoperable Plan. The conference will feature CASM workshops for all local participants to receive initial training on the tool they will be using for future planning scenarios involving interoperable communications.

Standard operating procedures development will be the third critical element of the conference. Existing statewide and regional interoperable communications policies will be reviewed in regional breakout sessions. With the idea of expanding regional working groups statewide, those agencies not currently participating in regional working groups will be paired with large existing groups for sharing of plans.

5.6 Funding Initiatives

The funding source for Project SAFE-T is statutorily established through the year 2019. (See [Section 3.6. Committed Sources of Funding](#)).

Local Indiana first responders, despite the savings realized through Project Hoosier SAFE-T, still have trouble finding the funds to purchase radios and other equipment to operate on the system. The state is dedicated to pursuing all avenues to help locals join the statewide network, if desired.



5.6.1 Leverage grant writing resources for locals

While dependence upon grants is not a reliable source of continued funding for critical communications equipment, the state of Indiana will continue to aggressively pursue and leverage funds toward local communities to purchase portable and mobile radios for operation on the statewide interoperable communications system. Other funding opportunities will be pursued to assist with other interoperable communications equipment such as satellite telephones and gateways for use with legacy radio systems.

6 SCOPE & TIMEFRAME (2007-2010)

The Indiana SCIP is a living document. Funding and resources will define the ultimate scope of the goals and initiatives, which will be revised as needed.

INITIATIVE	TIMELINE
GOVERNANCE INITIATIVES	
Formalize Interoperability Coordinator	December 2008
Formalize Wireless Communications Policy Executive Committee as SEIC	December 2008
Establish Data Interoperability Governance/Planning Framework	December 2008
SOP INITIATIVES	
Establish an online repository for SOPs	September 2008
TECHNOLOGY INITIATIVES	
INData Plan for statewide data information sharing network/coordination.	Ongoing through 2010
Formalize PSIC strategy	March 2008
TRAINING INITIATIVES	
Leverage IDHS's Training Program	September 2008
Develop web based training & certification program	July 2009
Carry out regional interagency, cross-discipline interoperability exercises on a biennial basis.	Ongoing
USAGE INITIATIVES	



Common Language	20% by year end 2008 60% by year end 2009 99% by year end 2010
NIMS Compliance	Ongoing, as required by NIMS guidelines
Renew MPSCC	2008-2009
Establish Statewide User Group	March 2008/Ongoing
Use CASM to maximize system penetration	January 2008
Web-based information sharing	September 2008
Amateur Radio User Community	Ongoing/March 2008
Annual Interoperability Conference/NGO Inclusion	First Conference: June 2008
FUNDING INITIATIVES	
Leverage grant writing resources for locals	Ongoing

7 PERFORMANCE MEASURES

The IPSC will measure performance on a bi-annual basis using the criteria below. Some of the measures are a one-time qualification, requiring only a yes/no verification of whether the task has been accomplished. Other measures require ongoing monitoring and will reflect satisfactory or superior performance through percentages.

A thorough database (CASM) exists with statewide public safety agency information, including number of first responders, types of systems, equipment, and future interoperable communication needs.	Yes/No
A Statewide Interoperable Communications Coordinator serves as a champion for local and state public safety professionals.	Yes/No
Stakeholders are exploring technology and shared solutions for a public safety data sharing network via INData	Yes/No
Percentage of disciplines and agencies that are using common language protocol	20% by year end 2008 60% by year end 2009 99% by year end 2010



Percentage of public safety agencies using the CASM database to prepare their Interoperable Communications Plans and scenarios.	100% by end of grant term
Percentage of local and state public safety professionals that access and use web-based training and SOP repositories	100% by end of grant term
Percentage of counties that have submitted County Communications Plans.	100% by end of grant term
Percentage of local agencies that continue to migrate to the SAFE-T system.	Upwards trend
System performance remains at very high levels (Channel Availability, Total System Grade of Service)	Channel Availability: 99% Total System Grade of Service: 99%
Communications-specific tabletop exercises are conducted with multi-jurisdictional and multi-agency operations, technical, and dispatch participants	Yes/No
Percentage of users who use the state interoperable systems for pertinent everyday activities and emergency incidents to ensure familiarity with system and cooperation	Baseline to be determined July 2008
Redundant and diverse interoperable communication systems are available	Yes/No

7.1 Outcomes

A continuous flow of critical information is maintained as needed among multi-jurisdictional and multi-disciplinary emergency responders, command posts, agencies, and governmental officials for the duration of the emergency response operation in compliance with National Incident Management System (NIMS). To accomplish this, the jurisdiction has a continuity of operations plan for public safety communications to include the consideration of critical components, networks, support systems, personnel, and an appropriate level of redundant communications systems in the event of emergency.

Exhaustive research and analyses will yield both a big picture and down-to-the-smallest details snapshot of Indiana's public safety agencies and the first responders who work there. This data will be used to effectively plan for and respond to natural and man-made disasters.

Indiana will lead the movement into next generation interoperable communications – public safety data sharing – with the same pragmatic, grass-roots approach that has made the statewide voice system such a success.

8 SCIP REVIEW & UPDATE PROCESS

Review and Update Process

Using the DHS Preparedness cycle, the IPSC will work with statewide and regional user groups as well as other stakeholders to refine and enhance the statewide plan as necessary.



This SCIP is a living document derived from past and ongoing statewide strategic planning. It is synchronized with many other federal, state, regional and local plans and requires periodic updates that are coordinated with the strategic direction of the state, federal and local jurisdictions. This update and review process is established to manage changes, plan future initiatives and track successes that occur during implementation.

Full review will occur biennially. The State Interoperability Coordinator is responsible for the review and update process. Subsequent versions of the SCIP will establish new strategic initiatives, track progress against previous strategic initiatives and reflect the milestones accomplished during the previous implementation cycle.

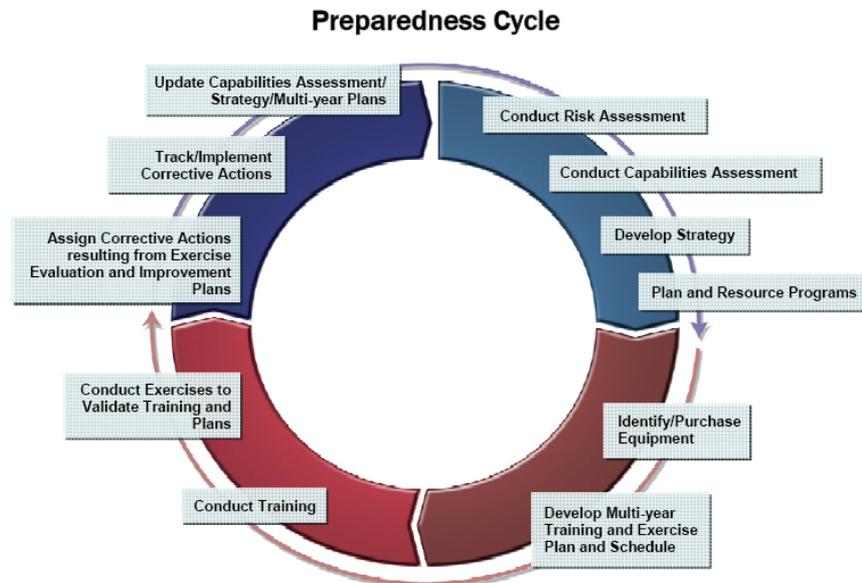
Stakeholders across Indiana will have the opportunity to comment on the document on an ongoing basis via the [regional and statewide user groups](#). Additionally, the annual [Interoperability Conference](#) will provide first responders with a forum for discussion. Ongoing discussion and comment may occur via the [web-based information sharing newsgroup](#).

The update and review process will incorporate current United States Department of Homeland Security, Office of Interoperability and Compatibility (OIC) SAFECOM and Disaster Management (DM) programs SAFECOM Methodology, practices and procedures.

The Integrated Public Safety Commission is responsible for approving new strategic initiatives contained in updated SCIPs.

In addition to local and statewide user meetings and input derived, the IPSC will fully employ available technology, including the new content management website, to distribute and solicit information about the status of communications interoperability. Other technological tools, such as online/virtual meetings will be used to maximize reach for the least amount of money.

The IPSC Annual Report will continue to serve as a progress report and review for statewide integrated public safety communications.





9 SUMMARY

9-11. Oklahoma City Bombing. Deadly VX nerve agent neutralization. Hurricane Katrina. Indiana tornados. Prisoner transport. Police pursuits. Snow removal. All these events pound home a harsh lesson: whether a monstrous act of nature, an act by monstrous men or day-to-day efforts to keep people safe, the bottom line remains the same. Lives can be saved and suffering can be lessened if first responders involved in protection and recovery missions can talk with each other.

Fortunately, Indiana first responders began a cooperative effort years ago which has resulted in a true border-to-border system for interoperable communications. With initial system construction complete and growth and expansion being performed as routine staff work, the state must now turn to the task of maximizing the federal, state and local investments in the system. This Statewide Interoperable Communications Plan provides **the roadmap** for the coming months and years.



Appendix A: Reference and Addendum

[Statewide Public Safety Voice/Data Communications System Strategic Plan \(1998\)](#)

[1998 Plan Appendices](#)

[Enacting Legislation: Indiana Code 5-26](#)

[SAFE-T System Users Chart](#)

[IPSC 2006 Annual Report](#)

[IPSC Enacting Legislation](#)

[Project Hoosier SAFE-T System Policy Handbook](#)

[Indiana Strategy for Homeland Security](#)

[Indiana Department of Homeland Security 2007 Emergency Management Capability Assessment](#)

[Indiana National Incident Management System \(NIMS\) Statement of Compliance](#)

[County Communications Plans Guidelines](#)

[Indiana Hazard Mitigation Plan](#)

[Indiana Emergency Support Function \(ESF\) 2 - Communications](#)

[700MHz Interoperability Channel Plan](#)

[Indianapolis UASI Tactical Interoperability Plan \(TICP\)](#)

[Ardent Sentry/IPSC After Action Report](#)

[Volunteer Emergency Communications for Indianapolis / Marion County, Indiana](#)

[Midwest Public Safety Communications Consortium \(MPSCC\) Report](#)

[Midwest Public Safety Communications Consortium \(MPSCC\) Draft MOU](#)



Appendix B: Acronym Key

Acronym	Definition
ARES	Amateur Radio Emergency
CASM	Communication Assets Survey and Mapping
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
COML	Communications Unit Leader
CST	National Guard Civil Support Team
DHS	Department of Homeland Security
DM	Disaster Management
DMAT	Disaster Medical Assistance Team
DNR	Department of Natural Resources
DOC	Department of Corrections
DOH	Department of Health
DOJ	Department of Justice
EA	Enterprise Architecture
EAS	Emergency Alert System
EMC	Emergency Management Council
EMD	Emergency Management Division
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FCC	Federal Communications Commission
FNARS	Federal National Radio System
FRA	Frequency Reconfiguration Agreement
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
GPS	Global Positioning System
IC	Indiana Code
ICALL	Calling Channel for ITAC
I-CALL, I-TAC	M/A frequency pairs that are reused across the Nation. I-CALL is commonly referred to as a “hailing” channel used by out-of-area public safety members trying to contact local responders.
ICS	Incident Command System
ICTAP	Interoperable Communications Technical Assistance Program
IDHS	Indiana Department of Homeland Security
ILEEN	Indiana Law Enforcement Emergency Network
IDACS	Indiana Data and Communications System
IDNR	Indiana Department of Natural Resources
IDOC	Indiana Department of Corrections



INdata	Indiana Data Architecture Technology Alliance
INDOT	Indiana Department of Transportation
IP	Internet Protocol
IPSC	Integrated Public Safety Commission
ISP	Indiana State Police
LMR	Land Mobile Radio
MACS	Multi-Agency Coordination System
MDT	Mobile Data Terminal
MECA	Metropolitan Emergency Communications Agency
MIRS	Mobile Intelli-Repeater Site
MHz	Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz.
MOU	Memorandum of Understanding
NGO	Non-governmental organization
NIMS	National Incident Management System
NLEC	National Law Enforcement Channel
NPSPAC	National Public Safety Planning Advisory Committee
OIC	Office of Interoperability and Compatibility
PSIC	Public Safety Interoperable Communications
RACES	Radio Amateur Communications Emergency Services
RF	Radio Frequency
RFI	Request for Information
SAA	State Administrative Agent
SAFE-T	Safety - Acting for Everyone, Together
SCIP	Statewide Interoperable Communications Plan
SIEC	State Interoperability Executive Committee
SOP	Standard Operating Procedure
TA	Transition Administrator
TICP or TIC Plan	Tactical Interoperable Communications Plan
UASI	Urban Area Security Initiative
UHF	Ultra High Frequency – Range of 300 to 3,000 MHz. For public safety LMR, usually refers to two bands. 380 to 460 MHz (low) and 460 to 512 MHz (high).
VoIP	Voice over Internet Protocol
VHF	Very High Frequency – For public safety LMR, usually refers to VHF High Band with a range of 136 to 164 MHz. VHF Low Band has a frequency range below 100 MHz. VHF includes broadcast TV Channels 2-13, the FM broadcast band and some marine, aviation and land mobile services.



Appendix C: Glossery of Terms

911 (9-1-1): Used to describe the 911 telephone systems, Public Safety Answering Points (PSAP) and associated radio and data systems used to receive calls for assistance from the public, catalog and triage information, direct responders to emergency locations and provide support to field responders until event closure or until particular functions are assumed by others under ICS.

Agency: A division of government with a specific function offering a particular kind of assistance. In the Incident Command System, agencies are defined either as jurisdictional (having statutory responsibility for incident management) or as assisting or cooperating (providing resources or other assistance). Governmental organizations are most often in charge of an incident, though in certain circumstances private-sector organizations may be included. Additionally, nongovernmental organizations may be included to provide support.

Affiliated Zone: The zone to which a radio is currently affiliated. Affiliation - The process in which a subscriber unit signals to the system which talkgroup or site it is currently associated with.

Affiliation Group: The talkgroup to which a radio is currently affiliated.

Alias: An alphanumeric name used to identify a radio, talkgroup, site, etc. rather than using the assigned sixdigit ID number.

All-Hazards: Describing an incident, natural or manmade, that warrants action to protect life, property, environment, public health or safety, and minimize disruptions of government, social, or economic activities.

Analog: A type of radio signal that uses continuous changes in the amplitude or frequency of a radio transmission to convey information.

Analog modulation: A message signal impressed on a carrier signal for transmission through a channel.

Announcement Group: A collection of two or more talkgroups. Also called a multigroup.

Announcement Group Call: A group call involving two or more talkgroups. Also called a multigroup call.

Announcement Group ID: Unique identifier assigned to each announcement group in a Motorola trunking system.

APCO: Association of Public Safety Communications Officers. A national organization of communications professionals that supports and promotes public safety communications concerns.

Backbone: A backbone is a larger transmission line that carries voice and data gathered from smaller lines that interconnect with it.

Backhaul: In wireless network technology, backhaul refers to the capability to transmit voice and data traffic from a [radio](#) site to a [switch](#), i.e., from a remote site to a central site. In satellite technology, backhaul means to transmit data to a point from which it can be [up linked](#) to a satellite.

Band: The spectrum between two defined limited frequencies.

Bandwidth: The capacity of a telecom line or channel to carry signals. The necessary bandwidth is the amount of spectrum required to transmit the signal without distortion or loss of information. FCC rules require suppression of the signal outside the band to prevent interference. Common signal capacities used are:

- DS0: A single 64 Kbps channel, the building block of a T1 transmission line.
- T1 (DS1): A digital carrier of 1.544 Mbps. Twenty-four DS0 channels make up one T1 channel.
- OC1 (DS3): A digital carrier of 45 Mbps bandwidth. One OC1 channel can carry 28 DS1 channels.
- OC3: A digital carrier of 135 Mbps bandwidth. One OC3 channel can carry 3 OC1 channels.



Base Station: A fixed station in the land mobile service operating in a manner that communicates directly to field subscriber units.

Best Practice: The term "best practice" refers to those practices that have produced outstanding results in another situation and that could be adapted for our situation.

Busy Queuing: A method of queuing a call when resources are not available to grant the call.

Cache: A predetermined complement of tools, equipment, and/or supplies stored in a designated location, available for incident use.

Catastrophic Incident: Any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic event could result in sustained national impacts over a prolonged period of time; almost immediately exceeds resources normally available to State, local, tribal, and private-sector authorities in the impacted area; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened.

Cellular: Mobile/wireless telephone communications is geographically broken into relatively small cells.

Central Controller: Equipment at a master site or remote site that controls a set of base stations or repeaters. A central controller is typically a computer that processes inbound and outbound data traffic, assigns repeaters for voice channel access, and generally monitors and maintains order in the system.

Chain of Command: A series of command, control, executive, or management positions in hierarchical order of authority.

Channel: A connection between beginning and ending nodes of a circuit. A single path provided by a transmission medium via an electrical separation, such as by frequency or frequency pairs.

Citizen Corps: Citizen Corps, administered by the Department of Homeland Security, is a community-level program that brings government and private-sector groups together and coordinates the emergency preparedness and response activities of community members. Through its network of community, State and tribal councils, Citizen Corps increases community preparedness and response capabilities through public education, outreach, training and volunteer service.

Command: The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

Common Operating Picture: A continuously updated overview of an incident compiled throughout an incident's lifecycle from data shared between integrated systems for communication, information management, and intelligence and information sharing. The common operating picture allows incident managers at all levels to make effective, consistent, and timely decisions. The common operating picture also helps ensure consistency at all levels of incident management across jurisdictions, as well as between various governmental jurisdictions and private-sector and nongovernmental entities that are engaged.

Communications: Process of transmission of information through verbal, written, or symbolic means.

Communications Interoperability (SAFECOM definition): In general, interoperability refers to the ability of emergency responders to work seamlessly with other systems or products without any special effort.

Wireless communications interoperability specifically refers to the ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized.

Communications Interoperability: (Indiana's official definition) The ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized. Communications interoperability makes it possible for emergency response agencies to work effectively together, maximize resources, and effectively plan for government support operations, emergencies, disaster relief and recovery.

Console: A GUI (Graphical User Interface) based operator position that allows the console operators to interact with the system and communicate with radio users.



Console Patch: A control center subsystem that permits a mobile or portable radio on one channel to communicate with one or more radios on a different channel through the control center console.

Control Channel: Communication channel implemented by a base station or repeater used to transmit and receive channel assignment data or process other control commands from the system. Contrast with a base station or repeater functioning as a voice channel used to transmit and receive voice information.

Continuity of Government (COG): Activities that address the continuance of constitutional governance. COG planning aims to preserve and/or reconstitute the institution of government and ensure that a department or agency's constitutional, legislative, and/or administrative responsibilities are maintained. This is accomplished through succession of leadership, the predelegation of emergency authority, and active command and control during response and recovery operations.

Continuity of Operations (COOP) Plans: Procedures to ensure the continued performance of core capabilities and/or critical government operations during any potential incident.

Conventional: Radio system with dedicated, single-purpose analog channels (can be shared between several users with different operational needs; i.e., fire and police), operator must select the specific channel to be used.

Coverage: The geographic area included within the range of a wireless radio system.

Critical Infrastructure: Systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.

Cross-band: A repeater that receives in one frequency band and retransmits in a second frequency band (see repeater).

Digital: Radio transmission method, replacing analog FM systems, that transmits binary 1's and 0's much like a computer. Generally digital signals are more effective than analog signals in fringe areas (better coverage), however once the signal levels are below a certain threshold minimum no communications are possible. As data is normally digital, data transmissions are very compatible with digital radios.

Disconnect Tone: A subaudible, 163.64 Hz tone generated by a radio when dekeying. The controller uses this tone to start the timeout timer in message trunking. In transmission trunking, receipt of the Disconnect Tone causes an immediate release of the voice channel by the controller.

Dispatch: The ordered movement of a resource or resources to an assigned operational mission or an administrative move from one location to another.

Dynamic Reallocation: A feature of a trunked radio system. The ability to assign new talkgroups to user radios in a dynamic, over-the-air fashion. This function can be used during emergencies to redirect system traffic.

Emergency: Any incident, whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Emergency Call: The highest priority service of talkgroup call. When the emergency button of a subscriber unit is pressed and the PTT pressed, an Emergency Call is granted.

Emergency Manager: The person who has the day-to-day responsibility for emergency management programs and activities. The role is one of coordinating all aspects of a jurisdiction's mitigation, preparedness, response, and recovery capabilities. The local emergency management position is referred to with different titles across the country, such as civil defense coordinator or director, civil preparedness coordinator or director, disaster services director, and emergency services director. It now commonly is referred to as homeland security director.

Emergency Operations Center (EOC): The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher



level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, tribal, city, county), or some combination thereof.

Emergency Operations Plan (EOP): The ongoing plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards.

Emergency Response Personnel/ Emergency Response Management: Includes Federal, State, territorial, tribal, substate regional, and local governments, private-sector organizations, critical infrastructure owners and operators, nongovernmental organizations, and all other organizations and individuals who assume an emergency management role. Also known as emergency responders.

Emergency Response Providers: The term “emergency response providers” includes Federal, State, and local emergency public safety, law enforcement, emergency response, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities.

Emergency Support Functions: ESFs utilize standardized resource management concepts such as typing, inventorying, and tracking to facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident. The Framework identifies primary ESF agencies on the basis of authorities and resources. Support agencies are assigned based on the availability of resources in a given functional area. ESFs provide the greatest possible access to state and federal department and agency resources regardless of which agency has those resources.

Encryption: Encoding (and decoding) or “scrambling” of transmissions to provide secure/private communications that can only be unlocked by the intended/authorized recipient(s).

Enterprise Architecture: Enterprise Architecture identifies the main components of an organization and how they function together to achieve the business objectives. These components include personnel, business process, technology, financial information, and other resources.

Evacuation: Organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

Event: See Planned Event.

Exercise: Opportunities to test capabilities and improve proficiency in a risk-free environment. Exercises assess and validate policies, plans, and procedures. They also clarify and familiarize personnel with roles and responsibilities. Well-designed exercises improve interagency coordination and communications, highlight capability gaps, and identify opportunities for improvement. Community, State, Federal, and tribal jurisdictions should exercise their own response capabilities and evaluate their abilities to perform expected responsibilities and tasks.

Frequency: The number of cycles or events per unit of time Frequency bands – Frequency bands where land-mobile radio systems operate in the US including the following:

<u>Spectrum</u>	<u>Frequency Range</u>
High HF	25-29.99 MHz
Low VHF	30-50 MHz
High VHF	150-174 MHz
Low UHF	450-470 MHz
UHF TV Sharing	470-512 MHz
700 MHz	764-776/794-806 MHz
800 MHz	806-869 MHz
4.9 GHz	4940-4990 MHz

FEMA Regional Offices: FEMA has 10 regional offices, each headed by a Regional Administrator. The regional field structures are FEMA’s permanent presence for communities and States across America. The staff at these offices support development of all-hazards operational plans and generally helps States and communities achieve



a higher level of readiness. These regional offices mobilize FEMA assets and evaluation teams to the site of emergencies or disasters.

First Responder: The term "first responder" refers to those individuals who in the early stages of an incident are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101), as well as emergency management, public health, clinical care, public works, and other skilled support personnel (such as equipment operators) that provide immediate support services during prevention, response, and recovery operations.

Function: Refers to the five major activities in the Incident Command System: Command, Operations, Planning, Logistics, and Finance/Administration. The term function is also used when describing the activity involved (e.g., the planning function). A sixth function, Intelligence/Investigations, may be established, if required, to meet incident management needs.

Gateway: A device that can transparently interconnect radio audio paths so that agencies can patch into each other's radio channels in real time. This can be done at the baseband level or using Internet Protocol (IP). A gateway provides interconnection between two networks with different communications protocols.

Incident: An occurrence or event, natural or manmade, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornados, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

Incident Command: Responsible for overall management of the incident and consists of the Incident Commander, either single or unified command, and any assigned supporting staff.

Incident Command Post: The field location where the primary functions are performed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is a management system designed to enable effective incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Incident Commander: The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The Incident Commander has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Incident Management: The broad spectrum of activities and organizations providing effective and efficient operations, coordination, and support applied at all levels of government, utilizing both governmental and nongovernmental resources to plan for, respond to, and recover from an incident, regardless of cause, size, or complexity.

Incident Objectives: Statements of guidance and direction needed to select appropriate strategy(s) and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow strategic and tactical alternatives.

Indian Tribes: The United States recognizes Indian tribes as domestic dependent nations under its protection and recognizes the right of Indian tribes to self-government. Indiana has no federally recognized Indiana Tribes.



Infrastructure: Infrastructure refers to equipment, physical facilities, networks or other communications components required to move or transmit information between end points.

Initial Actions: The actions taken by those responders first to arrive at an incident site and may include immediate law enforcement, fire and emergency medical services, emergency flood fighting, evacuations, transportation system detours, and providing emergency information to the public.

Initial Response: Resources initially committed to an incident.

Interference: Extraneous energy, from natural or man-made sources, that impedes the reception of desired signals.

Internet Protocol (IP): IP is a data-oriented protocol used by source and destination hosts for communicating data across a packet-switched internetwork.

Interoperability: Communications systems that can exchange information or services instantly and satisfactorily.

Interoperability Coordinator: An individual tasked with bringing together issues, solutions, policies, plans, and strategies relative to communications operability. The position focuses on improving interoperability communications at the local, state, and federal levels of government.

Jurisdiction: A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., Federal, State, tribal, and local boundary lines) or functional (e.g., law enforcement, public health).

Jurisdictional Agency: The agency having jurisdiction and responsibility for a specific geographical area, or a mandated function.

Land Mobile: A public or private radio service providing terrestrial two-way communication, service paging and radio signaling.

Local agency: Includes any or all local city, county, and regional entities, tribal governing bodies.

Local Government: A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government. See Section 2 (10), Homeland Security Act of 2002, Public Law 107-296, 116 Stat. 2135 (2002).

Major Disaster: Any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought) or, regardless of cause, any fire, flood, or explosion in any part of the United States that, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Stafford Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby

Microwave: Communications systems that use frequencies from about 1 gigahertz upward for point-to-point and point-to-multipoint communications, including common carriers, cable TV operators, broadcasters, and private operational fixed users. In this context, it is the technology that is used to connect the radio transmission sites together.

Mobile Intelli-Repeater Site (MIRS): A portable 5 channel site with an antennae, deployed to areas hit by disaster. The MIRS has the ability to connect to existing T1 telecommunication circuits with instantaneous results. The MIRS is also used to boost communications coverage during special events that require concentrated coverage or specialized communications. The MIRS houses a JPS 1000 unit to provide interoperable communications between VHF, UHF, and other radio systems and is available to any public safety agency during an emergency.

Multigroup Announcement Group: A collection of two or more talkgroups.

Multigroup Call Announcement Group call: A group call involving two or more talkgroups.



Multiagency Coordination System(s) (MACS): Multiagency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination. The elements of multiagency coordination systems include facilities, equipment, personnel, procedures, and communications. Two of the most commonly used elements are emergency operations centers and MAC Groups. These systems assist agencies and organizations responding to an incident.

Mutual Aid: Generally describes a situation where a major emergency or incident requires a large number of agencies, including agencies from remote locations, working together to mitigate the crisis.

Mutual Aid Channel: A radio channel specifically allocated for use during emergency mutual aid situations.

Narrowband: In LMR systems, the FCC has mandated reducing channel bandwidths from 25 kHz to 12.5 kHz by 2013, thereby potentially doubling the number of available channels. Narrowband operations will be mandatory by January 1, 2013, when all public safety users must cease operation of wideband equipment.

National Exercise Program: Program coordinated by DHS that meets the Federal requirement that departments and agencies evaluate and improve their capabilities to perform in a crisis or emergency across the 15 incident and planning scenarios contained in the National Preparedness Guidelines. The National Exercise Program contains a Corrective Action Program System, a web-based tool that enables Federal, State and local emergency response and homeland security officials to implement the corrective action program process.

National Incident Management System (NIMS): Provides a systematic, proactive approach guiding government agencies at all levels, the private sector, and nongovernmental organizations to work seamlessly to prepare for, prevent, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment. NIMS codified emergency management discipline in six areas, including incident command and management structures, core preparedness activities, resource management, communications, supporting technologies, and the maintenance for these systems over time.

National Response Framework (NRF): A guide to how the Nation conducts all-hazards incident management. It is built upon flexible, scalable, and adaptable coordinating structures to align key roles and responsibilities across the Nation. It is intended to capture specific authorities and best practices for managing incidents that range from the serious but purely local, to large-scale terrorist attacks or catastrophic natural disasters.

National Urban Search and Rescue (SAR) Response System: A system composed of the primary agencies that provide specialized SAR operations during incidents or potential incidents requiring a coordinated Federal response. The system is built around a core of task forces prepared to deploy immediately and initiate operations in support of ESF #9 – Search and Rescue. These task forces are staffed primarily by local fire department and emergency services personnel who are highly trained and experienced in collapsed structure SAR operations and possess specialized expertise and equipment.

National: Of a nationwide character, including the Federal, State, tribal, and local aspects of governance and policy.

Network: A network can refer to any interconnected group or system.

Nongovernmental Organization (NGO): An entity with an association that is based on interests of its members, individuals, or institutions. It is not created by a government, but it may work cooperatively with government. Such organizations serve a public purpose, not a private benefit. Examples of NGOs include faith-based charity organizations and the American Red Cross. NGOs, including voluntary and faith-based groups, provide relief services to sustain life, reduce physical and emotional distress, and promote the recovery of disaster victims. Oftentimes these groups provide specialized services that help individuals with disabilities. NGOs and voluntary organizations play a major role in assisting emergency managers before, during, and after an emergency.

On Demand: Immediately available when mission requires. Must be available under any circumstances.

Patch: A subsystem that enables a mobile or portable radio on one system/channel to communicate with one or more radios on a different system/channel via a control center console or interoperability device.



Preparedness: A continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and improving in an effort to ensure effective coordination during incident response

Private Sector: Organizations and entities that are not part of any governmental structure. The private sector includes for-profit and not-for-profit organizations, formal and informal structures, commerce, and industry.

Proprietary Standard: A standard that is exclusively owned by an individual or organization, the use of which generally would require a license and/or fee

Public Safety: Public Safety involves the protection of the general population from all manner of significant danger, injury, damage or harm, such as may occur in a natural disaster, and the prevention of the same. This protection is typically provided by emergency service organizations such as police, fire and EMS.

RF: Radio Frequency.

Real Time: When there is no noticeable delay between the time information is sent and when it is received.

Receiver: The component(s) of a radio device that converts the radio waves into audible signals.

Remote Site: A site that consists of repeaters and a site controller, which are linked to a Master Site. Repeater Station - a master site or remote site that broadcasts and receives RF signals to and from mobile and portable radios in the field.

Repeater: Special receiver/transmitter combination that receives a signal on one frequency and retransmits a new signal on another frequency, usually within the same frequency band, sometimes referred to as a relay station.

Response: Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice.

Roaming: Use of a wireless phone or public safety mobile communications (PSMC) equipment outside of the "home" service area defined by a service provider or system. Allows a user to travel statewide and communicate as if they were still in within their local area.

SAFECOM: SAFECOM is managed by the Department of Homeland Security (DHS) Science and Technology (S&T) Directorate's Office for Interoperability and Compatibility (OIC). Its mission is to serve as the umbrella program within the federal government to help local, state, tribal, and federal public safety agencies improve public safety response through more effective and efficient interoperable wireless communications - allowing 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 as authorized.

SAFECOM Interoperability Continuum: Is a tool to help the emergency response community and policy makers measure, analyze and address critical elements required for success as they plan and implement their short- and long-term interoperability efforts. The Continuum depicts the core facets of interoperability according to the stated needs and challenges of the emergency response community. The *elements* of interoperability defined in the Continuum include governance, standard operating procedures (SOPs), technology, training and exercises and usage.

Satellite: Radio relay station (repeater) that orbits the earth. A complete satellite communications system also includes earth stations (and portables/mobiles) that communicate with each other via the satellite. The satellite receives a signal transmitted by an originating earth station and retransmits that signal to the destination earth station(s)/receiver(s). Satellites are used to transmit telephone, television and data signals originated by common



carriers, broadcasters, distributors of cable TV program material and for PSMC use into areas of coverage dead spots.

Simulcast: A wide-area trunked system configuration that uses multiple transmitter and receiver sites to extend coverage of the system. All the corresponding channel numbers at all the sites uses the same frequency.

SmartZone OmniLink: A software- based, very-wide-area radio communications network based on the interconnection of multiple SmartZone systems.

Spectrum: The range of electromagnetic radio frequencies used in the transmission of sound, data and television.

Stakeholder: A stakeholder, as defined in this in this SCIP, is any person, organization, entity jurisdiction or government, private or public, with an interest in or is affected by public safety actions or activities. This includes, but is not limited to, the public at large, first responders, emergency response personnel, city, county, tribal, state and federal elected officials as well as non-governmental organizations.

Standard Operating Procedure (SOP): Complete reference document or an operations manual that provides the purpose, authorities, duration, and details for the preferred method of performing a single function or a number of interrelated functions in a uniform manner.

Subscriber Unit: Equipment associated with a person or vehicle in the field. All mobile and portable equipment, including but not limited to portable radios, mobile radios, mobile data computers (laptops, terminals, etc.), pagers, cellular and satellite phones, and hand held data equipment such as personal digital assistants (PDAs).

System: An integrated combination of people, property, environment, and processes that work in a coordinated manner to achieve a specific desired output under specific conditions.

Talkgroup: A group of radio users that can share calls and messages as a group. A talkgroup comprises a group of users who have a need to communicate with each other. Talkgroup Call - Call involving other users within the originating user's own talkgroup.

Talkgroup ID: Unique identifier assigned to each talkgroup in a Motorola trunking system.

Talkgroup Scan: A feature that allows a subscriber unit to scan those talkgroups that have an affiliated member at the scanning radio's site. The Talkgroup Scan list(s) must be programmed in the radio.

Trunking: A method of sharing a small number of communication paths among a large number of users. When a user wants to transmit a message, the trunked system automatically selects a currently unused channel pair and assigns it to the user, decreasing the probability of having to wait for a free channel.

Unit ID: Unique identifier assigned to each radio in a Motorola trunking system. Users - The first responders/public safety officials operating on the Project Hoosier SAFE-T system.

Zone Controller - Handles the call processing, mobility, and some network management functions in an Omni-Link system.

Urban Area Security Initiative (UASI): The Urban Areas Security Program created a sustainable national model program to enhance security and overall preparedness to prevent, respond to, and recover from acts of terrorism. The Seattle UASI consists of Snohomish, King and Pierce Counties and Clark County, Washington participates in the Portland/ Vancouver UASI.

Voice over Internet Protocol (VoIP): VoIP is a standards-based technology that enables voice and audio signals to be transported over an Internet Protocol (IP) network. VoIP is capable of carrying both radio and traditional telephony calls. The audio is encoded using standard signal processing standards such as International Telecommunication Union (ITU) G.711 or ITU G.729, and is encapsulated in a standard transport protocol such as Real-Time Transport Protocol (RTP) or Secure RTP (SRTP).



Volunteer: Any individual accepted to perform services by the lead agency (which has authority to accept volunteer services) when the individual performs services without promise, expectation, or receipt of compensation for services performed. See 16 U.S.C. 742f(c) and 29 CFR 553.101.

Wideband: In LMR systems, most channels are of 25 kHz bandwidth for voice communications.

Wireless Communications Interoperability: The ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized.

