

# Tactical Interoperable Communications Plan

## Shelby County, Alabama



*This Tactical Interoperable Communications Plan template was designed and developed by Shelby County Emergency Management Agency and the Public safety responders within Shelby County.*

**Plan Date:** \_\_\_\_\_



## **Introduction:**

Individual first responders and emergency personnel typically have their own radio communications systems. These systems typically use different radio frequency ranges and electronic protocols that are not compatible. These responders are using dissimilar radio equipment but on similar missions.

As a result, these individuals are not able to communicate when they either are out of their own area or working jointly with other personnel. This plan will identify these discrepancies and provide the basis to develop/enhance interoperability between these individuals/agencies.

In the past there were only limited Mutual Aid frequencies and no Interoperable Frequencies. Today, there are National NPSPAC (National Public Safety Planning Advisory Committee) and Alabama Specific Mutual Aid/Interoperable Frequencies in use and these will be used in this plan.

Alabama Specific Mutual Aid frequencies are used between like entities such as law enforcement or fire services. These are existing frequencies and most have been available for years. These frequencies have generally been programmed into the responder's radios. The communication truck (Regional Command Vehicle – First T.E.A.M. Vehicle) will be able to connect various Mutual Aid frequencies electronically with other radio systems. National NPSPAC Interoperable Frequencies are also used to communicate between responders and the communications truck which can be dispatched to the scene. These frequencies can be either simplex or duplex operation. The communications truck will be able to connect various Mutual Aid and I/O frequencies together and with other radio systems.

Alabama has a Mutual Aid Communications Committee whom recommendations are included in this plan.

<i>Index</i>	<i>Page</i>
<b>Introduction</b>	3
<b>Index</b>	4
<b>Section 1 Shelby County</b>	5
1.1 Overview	5
1.2 Included Agencies	6
1.3 TICP Points of Contact	6
<b>Section 2 Governance</b>	7
2.1 Overview	7
2.2 Responsibilities	7
2.3 SCIT Membership	8
2.4 Agency Representation	9
2.5 Concept of Operations	11
<b>Section 3 Interoperability Equipment/Solutions</b>	12
3.1 Swap Radios	13
3.2 Shelby County Shared Channels	13
3.3 Shared Channels	14
3.4 Gateways	18
3.5 Shared Systems	19
<b>Section 4 Policies and Procedures for Interoperable Equipment</b>	20
4.1 Procedure for Making Resource Request	20
4.2 Procedure for Radio Cache Requirements and Use	23
4.3 Procedure for NPSPAC Mutual Aid Call and TAC Channel Activation	26
4.4 Procedure for VHF and UHF Shared Frequencies Use	32
4.5 Procedure for Fixed Site Gateways Activation and Use	34
4.6 Procedure for Mobile Gateway Deployment and Use	38
<b>Section 5 Procedure for Shared Systems Use</b>	43
<b>Section 6 Levels of Interaction (Day-to-Day, Joint Task Force, Mutual Aid)</b>	44
<b>Section 7 Plans for Tactical Communications during an Incident</b>	45
7.1 Participating Functional Disciplines	45
7.2 Plan Purpose	45
7.3 Concept of Operations	47
7.4 Levels of Support	47
7.5 NIMS/ICS	48
<b>Section 8 NIMS Communications Training (Comm. Unit Leader - COML)</b>	52
<b>Section 9 Methods to Expand Radio Coverage/Tactical Radio Plan</b>	53
9.1 Systems Scenario	53
9.2 Interoperability for Tactical Radio	54
<b>Appendix A: Included Agencies</b>	56
<b>Appendix B: Regional Interoperable Communications Vehicles (All)</b>	61
<b>Appendix C: Radio Protocol (10 Codes, etc.)</b>	62
<b>Appendix D: Shelby County Frequencies</b>	63
<b>Appendix E: Homeland Security Repeater Site Map</b>	64
<b>Appendix F: JPS ACU-1000 Operations</b>	65
<b>Appendix G: Regional Communication Response Vehicle (Overview)</b>	65
<b>Appendix H: ICS Form 205 (Incident Communications Plan)</b>	68
<b>Appendix I: Statewide Communications Interoperability MOU</b>	69
<b>Glossary</b>	70
<b>Record of Plan Changes</b>	75

## **Section 1     Shelby County**

### **Section 1.1    Overview**

Shelby County is located in the central portion of Alabama with a total area of 800 square miles or approximately 510,360 acres. The county is the most geologically diverse area in Alabama, if not the southeastern United States. It is bordered by Jefferson, Bibb, Chilton, Coosa, Talladega, and St Clair counties. Elevations range from 430 feet in the valley areas to 1400 feet on the ridge tops. The surface is generally rough and hilly, with ridges to the north and west; the east is rolling to hilly, and the south, hilly to broken. The estimated population as of 2006 was over 180,000. Interstate 1-65 crosses the county from north to south. Other main roadways are US 231, US 280, US 31 and SR 145 and 119. The county seat is located in Columbiana.

Cities and towns in the county:

Alabaster, Calera, Chelsea, Columbiana, Harpersville, Helena, Indian Springs Village, Montevallo, Pelham, Vincent, Westover, Wilsonville, Wilton, \*Leeds, \*Vestavia Hills \*Birmingham, and \*Hoover. (\*) *Denotes cities/towns that have a populace in Shelby County, Jefferson, St. Clair and Chilton County.*

This plan will outline a strategy for providing tactical (incident-based) interoperability solutions by identifying available resources, and establishing policies and procedures for the use of these resources.

#### **Communications within the county**

There are fifteen (15) local law enforcement and thirty two (32) fire and/or EMS responder agencies that cover Shelby County. The cities of Hoover and Birmingham are primarily located in Jefferson County but have substantial coverage areas within Shelby County. Leeds and Vestavia Hills have very small coverage areas within the County. The existing frequency bands in use are:

800 mhz	Birmingham and Vestavia Hills Police/Fire
UHF	Hoover and Pelham Police
VHF	Shelby County Sheriff and 10 police departments 31 Fire and EMS Agencies

Since the large majority of first responder use VHF, interoperability is an easier problem to solve than our bigger communications issue, the lack of wide-area mutual aid coordination channels. Shelby County has unique topology that hampers wide-area communications. Multiple mountain ridges run throughout the County so there is no single tower location that provides reliable communications. A good example of this problem is the County Fire Channel which uses six (6) repeater sites to get acceptable coverage for portable units.

**Section 1.2 Included Agencies**

This plan is designed to address interoperability issues within Shelby County, and includes all law enforcement, fire fighting, and emergency medical services first responders within the county. It catalogs mutual aid, interoperability, and daily use radio resources, for quick reference in a disaster. It is designed to interface with the Tactical Interoperable Communications Plan for Alabama Homeland Security Region 3. All cities and towns within Shelby County are included. A complete list of included agencies is available at Appendix A.

**Section 1.3 Tactical Interoperable Communications Plan Point of Contact**

For questions regarding this plan, contact:

**State Point of Contact**

Art Faulkner  
Alabama Department of Homeland Security  
Post Office Box 304115  
Montgomery, Alabama 36130-4115  
Phone: (334) 956-7272  
Email: art.faulkner@dhs.alabama.gov

**ADHLS Region 3 Point of Contact:**

Don Greene-HLS Region 3 POC, Shelby County EMA Director  
504 Highway 70, Columbiana, Alabama 35051  
Phone: (205) 669-3999 (205) 288-9252 (cell)  
Email: dgreene@shelbyal.com

**Local County Emergency Contacts: (POC)**

<b><u>EMA Location (City)</u></b>	<b><u>Local EMA Dir</u></b>	<b><u>Local E-911 Dir</u></b>	<b><u>I/O Commo POC</u></b>
<b>504 Highway 70 Columbiana, AL</b>	<b>Don Greene (205) 669-3999 (205) 288-9252 cell dgreene@shelbyal.com</b>	<b>John Ellison (205) 439-6912 john@shelby911.org</b>	<b>Mindy Nash (205) 669-3999 (205) 288-6043 cell mnash@shelbyal.com</b>



## Section 2 Governance

### Section 2.1 Overview

This plan was reviewed by the Shelby County Interoperability Team, composed of Communications Unit Leaders from agencies within the county. *The Shelby County Interoperability Team (Shelby County - SCIT)* will oversee the implementation of the plan, including briefing member personnel on its contents, available regional interoperable communications resources and the resource request process.

### Section 2.2 Responsibilities

The **SCIT** will meet at least quarterly to discuss the progress of plan implementation, and any challenges or opportunities available to promote interoperable communications within the county.

This Governance Committee will hold the following responsibilities:

- Establishing and managing interoperable communications sub-committees
- Overseeing the maintenance and update of this TIC Plan
- Adopting final solutions and directing implementation
- Establishing training requirements in support of this TIC Plan
- Defining strategies for interoperable communications
- Establishing a Communications Unit Leaders program in accordance with NIMS
- Coordinating Memoranda of Understanding and Sharing Agreements, as needed, for interoperable communications
- Electing a chairperson of the Governance Committee on an annual basis as outlined in the Charter
- It has authority for coordination of interoperable communications resource, and will server as a clearing house for resolving interoperability issues within the county
- It has responsibility for assignment of interoperable communications resources within the county and for coordinating communications resources coming from outside the county

The **SCIT** will establish a working group or groups to determine operational requirements for implementing this plan, developing standard operating guidelines, and coordinating training of communications unit personnel.

### **Section 2.3 SCIT Membership**

Membership of this committee is listed below. Actual members will/may change during the life of this committee, as positions change or diversify. This list reflects the present selected membership.

Don Greene, Shelby County EMA, 504 Highway 70, Columbiana, AL. 35051  
[dgreene@shelbyal.com](mailto:dgreene@shelbyal.com) (205) 669-3999

Mindy Nash, Shelby County EMA, 504 Highway 70, Columbiana, AL. 35051  
[mnash@shelbyal.com](mailto:mnash@shelbyal.com) (205) 669-3999

Andrew Bryant, Alabaster Police, 201 1<sup>st</sup> Street North, Alabaster, AL. 35007  
[Andrew@alabasterpolice.org](mailto:Andrew@alabasterpolice.org) (205) 664-6857

John Ellison, Shelby County 911, 1004 County Services Drive, Pelham, AL. 35124  
[john@shelby911.org](mailto:john@shelby911.org) (205) 439-6912

Chris Ward, Pelham Fire, 3162 Pelham Parkway, Pelham, AL. 35124  
[cward@pelhamonline.com](mailto:cward@pelhamonline.com) (205) 620-6434

Skip Leslie, Alabaster Fire, 1950 Butler Road, Alabaster, AL. 35007  
[cjleslie@cityofalabaster.com](mailto:cjleslie@cityofalabaster.com) (205) 664-6817

Ken Burchfield, Sheriff's Office, 380 McDow Road, Columbiana, AL. 35051  
[kburchfield@shelbyso.com](mailto:kburchfield@shelbyso.com) (205) 670-6286

Chris Fulmer, Montevallo Fire, PO Box 732 Montevallo, AL. 35115  
[cfulmer1@gmail.com](mailto:cfulmer1@gmail.com) (205) 601-3762

Hub Harvey, Amateur Radio, 3912 Firewood Drive, Birmingham, AL. 35243  
[N4hub@arrl.net](mailto:N4hub@arrl.net) (205)967-5559

Les Rayburn, 121 Mayfair Park, Maylene, AL. 35114  
[les@highnoonfilm.com](mailto:les@highnoonfilm.com) (205) 620-3473

Tom Appleby, 2585 Royal Way, Pelham, AL. 35124  
[appleby2@bellsouth.net](mailto:appleby2@bellsouth.net) (205) 987-7844

## **Section 2.4 Agency Representation**

### **Shelby County**

Don Greene, Shelby County EMA, 504 Hwy 70, Columbiana, AL. 35051  
[dgreene@shelbyal.com](mailto:dgreene@shelbyal.com) (205) 669-3999

Mindy Nash, Shelby County EMA, 504 Hwy 70, Columbiana, AL. 35051  
[mnash@shelbyal.com](mailto:mnash@shelbyal.com) (205) 669-3999

### **City of Alabaster**

Andrew Bryant, Police Department, 201 1<sup>st</sup> Street North, Alabaster, AL 35007  
[Andrew@alabasterpolice.org](mailto:Andrew@alabasterpolice.org) (205) 664-6857

Skip Leslie, Fire Department, 890 1<sup>st</sup> Avenue West, Alabaster, AL 35007  
[Cjleslie@cityofalabaster.com](mailto:Cjleslie@cityofalabaster.com) (205) 664-6817

### **City of Calera**

Hilton Shirey, Fire Department, 1310 17<sup>th</sup> Avenue, Calera, AL 35040  
[hshirey@calera.org](mailto:hshirey@calera.org) (205) 668-3832

### **City of Chelsea**

Chief Wayne Shirley, Fire Department, 104 Chesser Drive, Chelsea, AL. 35043  
[chiefshirley@bellsouth.net](mailto:chiefshirley@bellsouth.net) 205-678-6060

### **City of Columbiana**

### **City of Helena**

Tim Carter, Police Department, 816 Highway 52 East, Helena, AL 35080  
[tcarter@helenapd.com](mailto:tcarter@helenapd.com) (205) 663-6499

Chaed Agee, Fire Department, 816 Highway 52 East, Helena, AL 35080  
[E62medic@yahoo.com](mailto:E62medic@yahoo.com) (205) 663-5809

### **City of Hoover**

### **City of Montevallo**

Chris Fulmer, Fire Department, PO Box 732 Montevallo, AL. 35115  
[cfulmer1@gmail.com](mailto:cfulmer1@gmail.com) (205) 601-3762

Chris Fulmer, Police Department, PO Box 732 Montevallo, AL. 35115  
[cfulmer1@gmail.com](mailto:cfulmer1@gmail.com) (205) 601-3762

### **City of Pelham**

Chris Ward, Fire Department, 3162 Pelham Parkway, Pelham, AL. 35124  
[cward@pelhamonline.com](mailto:cward@pelhamonline.com) (205) 620-6434

Captain Larry Palmer, Police Department, 3174 Church Street, Pelham, AL. 35124  
[lpalmer@pelhamonline.com](mailto:lpalmer@pelhamonline.com) (205) 620-6550

**Dunnivant Fire Department**

Chief Ben Kirkland, 57095 Hwy 25, Leeds, AL. 35094  
[cvfdbilling@bellsouth.net](mailto:cvfdbilling@bellsouth.net) (205) 699-3473

**North Shelby Fire and EMD**

Chief Michael O'Conner, 4617 Valleydale Road, Birmingham, AL. 35242  
[chief@northshelbyfire.com](mailto:chief@northshelbyfire.com) (205) 991-6439 ext 11

**Pea Ridge Fire and Rescue**

Chief Alan Picklesimer, 8687 Hwy 10, Montevallo, AL. 35115  
[alanpicklesimer@dishmail.net](mailto:alanpicklesimer@dishmail.net) (205) 263-5528

**Saginaw Fire Department**

Chief Dennis Agnew, 566 Highway 26, Saginaw, AL. 35137  
[sagchief@charter.net](mailto:sagchief@charter.net) (205) 664-7711

Assistant Chief, James Henderson, 566 Highway 26, Saginaw, AL. 35137  
[sagtrain@charter.net](mailto:sagtrain@charter.net) (205) 994-0091

**Shelby County Sheriff's Office**

Captain Ken Burchfield, 380 McDow Road, Columbiana, AL 35051  
[kburchfield@shelbyso.com](mailto:kburchfield@shelbyso.com) (205) 670-6286

**Shelby Fire Department**

Chief Cain Reed, 4895 Highway 47, Shelby, AL. 35143  
[shelbyfirehouse@bellsouth.net](mailto:shelbyfirehouse@bellsouth.net) (205) 669-0140

**Summerhill Fire Department**

Chief Jeff Jones, 17947 Highway 25, Columbiana, AL. 35051  
[jjones@shelbyal.com](mailto:jjones@shelbyal.com) (205) 669-6488

**Town of Vincent**

James Srygley, Police Department, 25 Florey Street, Vincent, AL 35178  
[chiefsrygley@bellsouth.net](mailto:chiefsrygley@bellsouth.net) (205) 672-2261

Mike Smiley, Fire Department, 42030 Hwy 25, Vincent, AL. 35178  
[Vfrs150@bellsouth.net](mailto:Vfrs150@bellsouth.net) (205) 672-8070

**University of Montevallo**

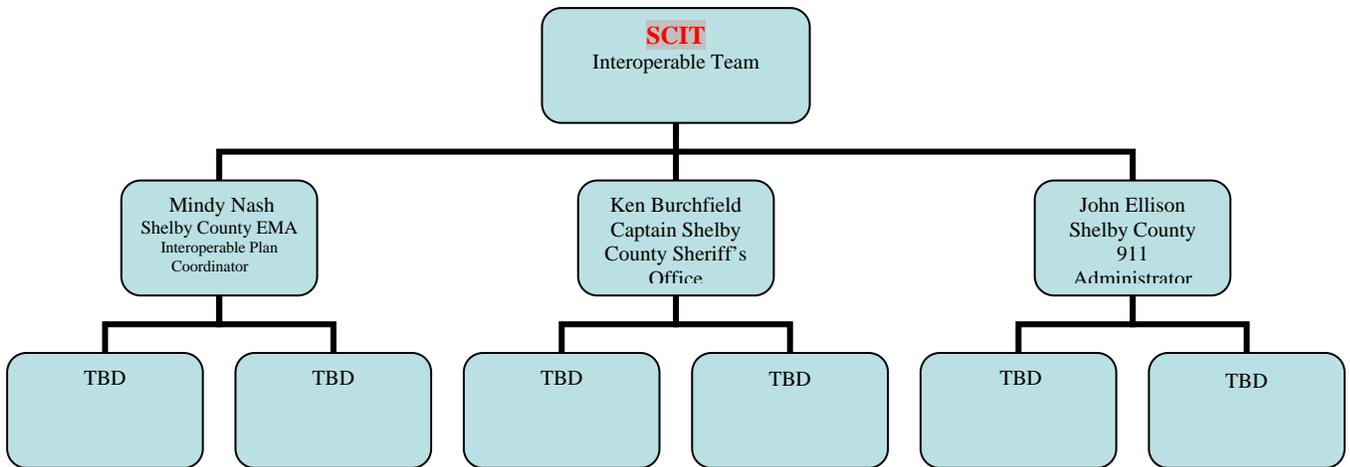
Chief Shelli Tyree, 75 College Drive, Montevallo, AL 35115  
[tyreelm@montevallo.edu](mailto:tyreelm@montevallo.edu) (205) 665-6155

This plan should be shared with communications personnel at all police agencies, fire

agencies, and EMS agencies within the county, so they can fully participate in interoperability efforts.

## Section 2.4 Concept of Operations

- A. The **SCIT** shall organize and operate in a manner compliant with the National Incident Management System (NIMS) and the management principles of the Incident Command System (ICS).
- B. Specialized response teams shall organize and operate using ICS principles and practices and shall integrate into the local incident management system structure upon arrival on the scene.
- C. The planning efforts and work products will meet the requirements of the US and Alabama Department of Homeland Security and the Alabama Emergency Management Agency.
- D. Incident Action Plans (IAP) will be developed for the Workgroup that includes all projects and activities using appropriate operating periods given the Workgroup meeting frequency and specific project timetables.
- E. The **SCIT** is organized into teams to accomplish those responsibilities as depicted in the Team/Workgroup Organization Chart below.



### Section 3 Interoperability Equipment/Solutions

This section provides an inventory of interoperability communications equipment available in the county and selected resources that may be requested from the state or adjoining county(s) to assist in the tactical interoperable communications.

#### **Equipment Available at AEMA EOC in Clanton, AL.**

#### **The following State Equipment is ready for deployment anywhere it is needed. Equipment Stored Ready for use – overseen by the State EOC in Clanton, AL.**

- ❖ 7 Regional Vehicles with VHF, UHF, I/O, Data and Satellite capability.
- ❖ 1 AEMA owned vehicle with VHF, UHF, I/O, Data and Satellite capability.

#### **Please Reference Vehicles Pictures and Illustration Appendix B.**

- ❖ 1 State owned vehicle located at Alabama Forestry with VHF, UHF, I/O, Data and Satellite capability
- ❖ 1 State owned vehicle located at DPS with VHF, UHF, I/O, Data and Satellite capability.
- ❖ 1 State controlled vehicle located at ALNG Civil Support Team with VHF, UHF, I/O, Date and Satellite capability
- ❖ 1 AEMA owned transportable ACU unit with 3 VHF and 1 UHF radios for temporary operation in a local area.
- ❖ 67 Counties have fixed I/O equipment installed or in process of installation and programmed with local/regional frequencies.

#### **Other Communications Equipment (maintained by AEMA):**

- ❖ AEMA Mobile Command Vehicle with limited UHF, VHF and 800 MHz radio equipment.
- ❖ Cache of pre-programmed LINC radios with specific groups for use during disasters.
- ❖ Cache of Cellular telephones.
- ❖ Cache of pre-programmed UHF portable radios with AEMA repeaters, AEMA simplex and I/O frequencies.
- ❖ Cache of 800 MHz portable radios with simplex frequencies to be used on site.
- ❖ Pre-programmed VHF/UHF base stations with repeater and simplex frequencies VHF/UHF radios in AEMA vehicles with I/O frequencies.

### Section 3.1 Swap Radios (if available)

Swap radios are provided for out-of-town agencies that arrive to assist an agency on an incident with a different radio system. Insert a local example of an agency that is not on the same radio band or system as most responders in your county.

Swap radios may be issued to individuals assisting as in the above example, or to team leaders from out of town. This approach provides communications from the Incident Commander to the team leader, while intra-team communications are conducted on their own equipment.

<b>Local Radio Caches</b>					
<u>Agency</u>	<u>Cache Name</u>	<u>#</u>	<u>Type</u>	<u>Frequency/Other</u>	<u>Location</u>
<i>County Sheriff</i>	<i>SCSO</i>				
<i>County EMA</i>	<i>EMA</i>	<i>8</i>	<i>HT1250 Motorola</i>	<i>VHF (Programmed with I/O Channels)</i>	<i>EMA Commo Room Storage</i>
<i>County EMA</i>	<i>EMA</i>	<i>4</i>	<i>Southern Linc</i>	<i>AEMA Programmed</i>	<i>EMA Commo Room</i>
<i>VHF (Programmed with I/O Channels)</i>	<i>SO</i>	<i>6</i>	<i>DTR 650</i>	<i>VHF (Programmed with I/O Channels)</i>	<i>Sheriff's Office</i>
<i>Pelham FD</i>	<i>PFD</i>	<i>18</i>	<i>HT1250</i>		<i>Pelham Station 3</i>

### Section 3.2 Primary Frequencies for Shelby County

Shared Channels provide interoperable communications among agencies who use the same radio band. By having shared channels programs different agencies can communicate directly with one another. It is important that shared channels be referred to by standardized channel names. This minimizes confusion during emergency operations.

<b>Priority User AL RESPONDING UNITS</b>		
<b>Calling Channel</b>	<b>VCALL 10</b>	<b>Rx 151.7525 CSQ / Tx 151.7525 PI 156.7</b>
<b>Command Net Assignment (Regional, etc.) FIRE</b>		
<u>County/City/Agency</u>	<u>Command Net</u>	<u>Frequency</u>
<b>Shelby</b>	<b>VFIRE 21</b>	<b>Rx 151.1375 CSQ / Tx 151.1375 PI 156.7</b>
	<b>VFIRE 22</b>	<b>Rx 154.4525 CSQ / Tx 154.4525 PI 156.7</b>
	<b>VFIRE 23</b>	<b>Rx 158.7375 CSQ / Tx 158.7375 PI 156.7</b>
<b>Command Net Assignment (Regional, etc.) LAW</b>		
<u>County/City/Agency</u>	<u>Command Net</u>	<u>Frequency</u>
<b>Shelby</b>	<b>MALE (Old State)</b>	<b>Rx 155.0100 CSQ / Tx 155.0100 PI 156.7</b>
	<b>VLAW31 (National Law)</b>	<b>Rx 155.4750 CSQ / Tx 155.4750 PI 156.7</b>
	<b>VLAW 32</b>	<b>Rx 155.4825 CSQ / Tx 155.4825 PI 156.7</b>



### Section 3.3

### Shared Channels

<b>VHF High Band Shared Channels<sup>1</sup></b>			
<b>Channel Name</b>	<b>Frequency</b>	<b>PL Tone</b>	<b>Primary Use</b>
MALE	155.0100	None	All responders
VCALL31	155.4750	None	Law Enforcement
HEAR	155.3400	None	EMS
VFIRE21	154.2800	None	Fire Fighters
VFIRE22	154.2650	None	Fire Fighters
VFIRE23	154.2950	None	Fire Fighters
VCALL10	155.7525	None	All responders
VTAC11	151.1375	None	All responders
VTAC12	154.4525	None	All responders
VTAC13	158.7375	None	All responders
VTAC14	159.4725	None	All responders

<b>UHF National Shared Channels<sup>2</sup></b>			
<b>Channel Name</b>	<b>Frequency IO</b>	<b>PL Tone</b>	<b>Primary Use</b>
UCALL/UCALLa	453/458.2125	None	All responders
UTAC/UTAC1a	453/458.4625	None	All responders
UTAC/UTAC2a	453/458.7125	None	All responders
UTAC/UTAC3a	453/458.8625	None	All responders

<b>800MHz National Shared Channels<sup>3</sup></b>			
<b>Channel Name</b>	<b>Frequency IO</b>	<b>PL Tone</b>	<b>Primary Use</b>
NPSPAC1 ICALL/ICALLa	866/821.0125	156.7 Hz	All responders
NPSPAC2 ITAC-1/ITAC-1a	866/821.5125	156.7 Hz	All responders
NPSPAC3 ITAC-2/ITAC-2a	867/822.0125	156.7 Hz	All responders
NPSPAC4 ITAC-3/ITAC-3a	867/822.5125	156.7 Hz	All responders
NPSPAC5 ITAC-4/ITAC-4a	868/823.0125	156.7 Hz	All responders
Ala Mutual Aid	853/808.3875	210.7 Hz	Ala Mutual Aid

<sup>1</sup> This list includes some 20 KHz frequencies that will change when the transition to narrowband (12.5 KHz) is completed. The deadline for transition to narrowband is January 1, 2013. VTAC, etc. base stations must be licensed if antenna height is over 20 feet and power output is over 5 watts.

<sup>2</sup> These are all narrowband (12.5 KHz) channels with a standard + 5 MHz offset for repeater use. Nomenclature for simplex operations on the repeater output frequency is UCALLa, UTAC1a, etc... Base station must be licensed if antenna height is over 20 feet and power output is over 5 watts.

<sup>3</sup> These channels will change frequencies as Alabama (NPSPAC Region 1) completes rebanding. The target for transition is July 1, 2010. All 800MHz channels use a standard -45 MHz offset for repeater use.

Note: ICALL a, ITAC-1a, ITAC-2a, ITAC-3a, and ITAC-4a are all direct unit-to-unit channels. (National Public Safety Planning Advisory Committee - NPSPAC)

<b>Alabama Specific UHF Mutual-Aid Frequencies</b>		
<b>Agency</b>	<b>Freq I</b>	<b>Freq O</b>
Law Enforcement Emergency	460.27500	465.27500
EMS Medical Resource & Scene Control	463.17500	463.17500
EMS Medical Coordination	463.17500	468.17500

### **AEMA STATEWIDE UHF REPEATER SYSTEM**

**The AEMA UHF Repeater System is considered the backbone of the statewide UHF I/O system.** This series of repeaters essentially covers the state and most EMA county offices will be able to access at least one of these repeaters. All repeaters will be available at the State EOC. (See Map on next page.)

Note: A grant was provided to all counties to purchase a narrowband capable UHF base station with I/O pre-programmed frequencies.

**(Repeater Programming Frequencies on next page)**



Shelby County Tactical Interoperable Plan  
Public Safety Sensitive

## Statewide UHF Radio Communications Programming

<u>Name</u>	<u>Transmit (CG)</u>	<u>Receive (CG)</u>
Lauderdale	458.400 MHz (146.2 Hz)	453.400 MHz (162.2 Hz)
Madison	458.425 MHz (173.8 Hz)	453.425 MHz (162.2 Hz)
Cullman	458.650 MHz (151.4 Hz)	453.650 MHz (162.2 Hz)
Jefferson	458.725 MHz (127.3 Hz)	453.725 MHz (162.2 Hz)
Tuscaloosa	458.650 MHz (146.2 Hz)	453.650 MHz (162.2 Hz)
Cheaha	458.400 MHz (127.3 Hz)	453.400 MHz (162.2 Hz)
Lee	458.400 MHz (146.2 Hz)	453.400 MHz (162.2 Hz)
Sumter	458.725 MHz (173.8 Hz)	453.725 MHz (162.2 Hz)
Elmore	458.650 MHz (127.3 Hz)	453.650 MHz (162.2 Hz)
Escambia	458.650 MHz (173.8 Hz)	453.650 MHz (162.2 Hz)
Crenshaw	458.425 MHz (127.3 Hz)	453.425 MHz (162.2 Hz)
Clarke	458.425 MHz (146.2 Hz)	453.425 MHz (162.2 Hz)
Covington	458.400 MHz (151.4 Hz)	453.400 MHz (162.2 Hz)
Baldwin	458.400 MHz (173.8 Hz)	453.400 MHz (162.2 Hz)
Houston	458.725 MHz (151.4 Hz)	453.725 MHz (162.2 Hz)
AEMA S1	453.400 MHz (No Tone)	453.400 MHz (No Tone)
AEMA S2	453.425 MHz (No Tone)	453.425 MHz (No Tone)
AEMA S3	453.650 MHz (No Tone)	453.650 MHz (No Tone)
AEMA S4	453.725 MHz (No Tone)	453.725 MHz (No Tone)
UCALL	458.2125 MHz (No Tone)	453.2125 MHz (No Tone)
TA Call	453.2125 MHz (No Tone)	453.2125 MHz (No Tone)
UTAC 1	458.4625 MHz (No Tone)	453.4625 MHz (No Tone)
TA 1	453.4625 MHz (No Tone)	453.4625 MHz (No Tone)
UTAC 2	458.7125 MHz (No Tone)	453.7125 MHz (No Tone)
TA 2	453.7125 MHz (No Tone)	453.7125 MHz (No Tone)
UTAC 3	458.8625 MHz (No Tone)	453.8625 MHz (No Tone)
TA 3	453.8625 MHz (No Tone)	453.8625 MHz (No Tone)

### Section 3.4 Gateways

Gateways connect incompatible radio technologies so, for example, a responder on VHF could talk to a responder on UHF, while both responders are using the same radios they use on a daily basis. Gateways can be a dedicated piece of equipment, such as the Raytheon JPS ACU-1000, or a multi-purpose piece of equipment, like the Motorola Vortex Console. **NOTE: the ACU-1000 is NOT designed to interlink same band systems (i.e. VHF to VHF, UHF to UHF etc.)**

All eight (8) Alabama Incident Support Communications Vehicles and all sixty-seven (67) Communications Centers are equipped with ACU-1000 Fixed Units, TRP-1000 Tactical Units or console equipment with similar capabilities. There are advantages and disadvantages associated with both mobile and fixed gateway equipment. Fixed gateway equipment is already in place, and has antennas mounted on towers or buildings. Fixed gateways can be activated more quickly, and provide better coverage to incidents relatively close to the gateway. -Mobile gateways take time to mobilize, but can provide better coverage for incidents that are a significant distance from a fixed gateway.

<b>Shelby County Gateways</b>				
<b>Agency</b>	<b>Type</b>	<b>City</b>	<b>Contact</b>	<b>Contact Phone</b>
ShelbyCounty Sheriff's Office	JPSACU-1000 Fixed	Columbiana	Ken Burchfield	205-669-4181
Pelham FD	JPSACU1000 Mobile	Pelham	Chris Ward	205-620-6434

*List complete Gateway and Radio Cache Descriptions for each agency. This includes Owner, Location, Brand, Nets, Active Ports, Available Ports, Function, etc.*

#### Shelby County EMA, Columbiana, Alabama

**Owner**

Shelby County EMA  
 Don Greene, EMA Director, 205 669-3999  
[dgreene@shelbyal.com](mailto:dgreene@shelbyal.com)

**Location**

Shelby County Sheriff's Office (Unit 1)  
 Brand

JPS TRU-1000 Fixed

**Radios Tied In**

3VHF - Ready  
 1UHF - Ready w/extra batteries  
 1 Southern Linc

**Function**

To provide a portable gateway to support events throughout the county.

**Location**

Pelham TRU (Unit 2)

**Brand**

JPS TRU-1000 Mobile

**Radios Tied In**

2VHF - Ready  
 1UHF - Ready



**Section 3.5 Shared Systems (if available)**

Shared systems are trunked radio systems that are used by more than one agency. This provides interoperability among the agencies that share the system. For agencies outside the system to communicate with its users, they must obtain a swap radio as outlined in Section 3.1, or use a gateway, as outlined in Section 3.3.

**Primary Communications System of AEMA:**

The normal day to day system that AEMA uses is SouthernLINC. This system covers most of the state. Each county EMA office has LINC equipment, both fixed and portable. This system has the option of connecting different fleets (Cross-Fleet) on the newer portable radios and that in itself is a form of I/O communications. Several other state agencies, counties, local municipalities and the Federal Emergency Management Agency have this type of equipment.

Area Shared Systems	Agencies
<i>Alabama EMA Southern Linc iDEN</i>	<i>Alabama Dept of Homeland Security</i>
	<i>Alabama Emergency Management Agency</i>
	<i>Alabama Department of Environmental Management</i>
	<i>Shelby County EMA</i>
<i>Alabama EMA Statewide UHF Repeater System</i>	<i>Alabama Emergency Management Agency</i>
	<i>Alabama Mutual Aid System Teams</i>
	<i>Shelby County Emergency Management Agency</i>
<i>Shelby County Systems</i>	<i>Alabama Emergency Management Agency</i>
	<i>Alabama Forestry Commission</i>
	<i>Alabama Forestry Department</i>
	<i>Shelby County Board of Education</i>
<i>Shelby County Sheriff's Office</i>	

## **SECTION 4 POLICIES AND PROCEDURES FOR INTEROPERABLE ASSETS**

### **General Radio Rules of Use**

#### **General**

- National Incident Management System – Use of an Incident Command System compliant with the National Incident Management System (NIMS) is required for use of any regional interoperability resource
- Plain Language – All communications may be in plain language although a Standard Ten Code may be used (Reference Appendix C). Acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as “help,” “assistance,” “repeat” and “back-up” may have different operational meanings to different agencies. The word “help” should not be used alone unless in the context of a life-threatening situation. Requests for assistance or back-up should clarify the reason for the request.
- Unit Identification – Agency name or identification shall precede unit identification.

### **Section 4.1 PROCEDURE FOR MAKING RESOURCE REQUESTS.**

#### **Section 4.1.1 Local Interoperable Communications Asset Request.**

- A request is made by a responding agency for a local interoperable communications asset. (e.g.: mobile command post, radio cache, gateway) The Incident Commander or their designee, and the local communications center validate the request. If it is an asset that the requesting agency controls then it is deployed and the local Emergency Operations Center (EOC) is notified of the deployment. If it is an asset that is under the control of another agency within the county, then the EOC will provide the requesting agency with the necessary contact information to make the request or the local EOC may make the re-quest for the requesting agency. The local EOC will make a record of the deployment so that it is known that the asset is in use and/or no longer available. The County EOC will also notify the regional interoperable communications chairpersons and the State EOC of the deployment. A tracking number will be assigned to the request.

#### **Section 4.1.2 Regional Interoperable Communications Asset Request.**

- A request is made by a responding agency for a regional communications asset. (e.g.: EDICS Unit, Communications Response Team) The Incident Commander or their designee and the local communications center validate the request. The request is submitted to the local Emergency Operations Center (EOC) in the county where the incident or event is occurring. The County EOC will make contact with the State EOC who will task the Region \_

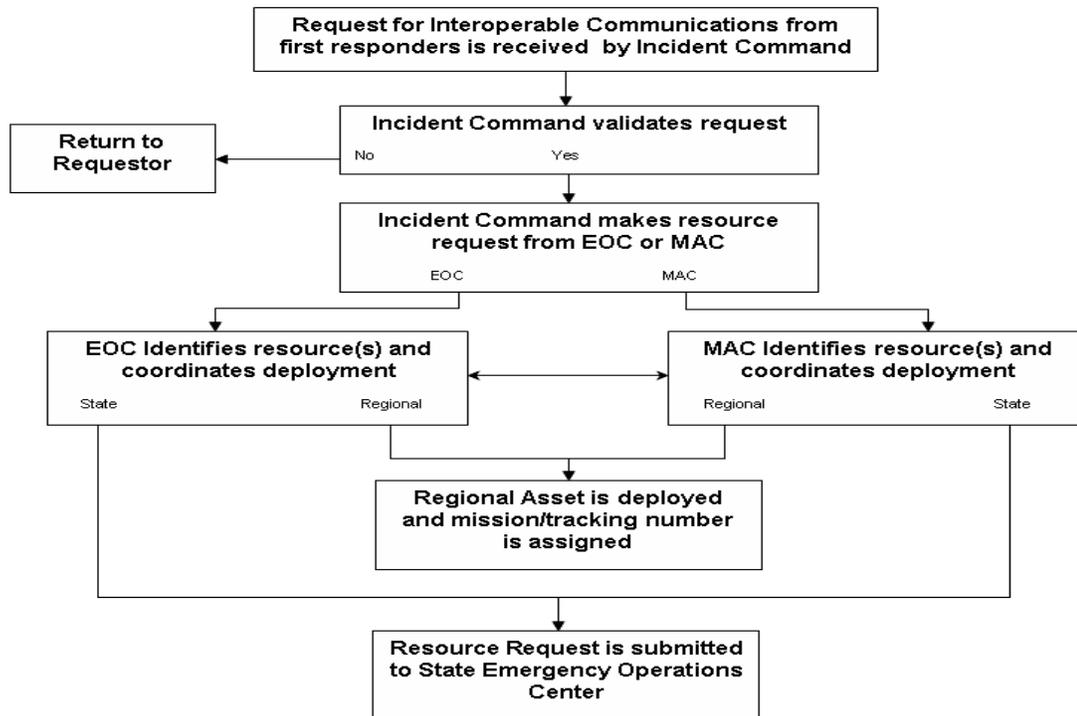
Multi-Agency Coordination Group (R\_IT) if it is activated, or the RHSTF Interoperable Communications Chairperson(s) in the Region to process the re-quest, determine the most appropriate solution to meet the need and mobilize the asset.

- The R\_IT if activated will notify the State EOC of the deployment and the tracking number. The County EOC and the R\_IT will make a record of the deployment so that it is known that the asset is in use and/or no longer available.
- The host agency for a regional communications asset is responsible for ensuring that a mission tracking number is assigned to the deployment, however, deployment is not delayed or dependent upon the assignment of this number. The absence of a mission tracking number may have a fiscal impact on the re-requesting and/or host agency.

#### **Section 4.1.3. State Interoperable Communications Asset Request.**

- A request is made by a responding agency for a communications asset maintained and/or hosted by the State of Alabama. (e.g.: State Mobile Command Posts, Mobile Mutual Aid Repeater Site, SLERS portable cache) The Incident Commander or their designee and the local communications center validate the request.
- The request is submitted to the County EOC in the county where the incident or event is occurring. The County EOC will make contact with the State EOC, who will process the request, determine the most appropriate solution to meet the need and mobilize the asset.
- The State EOC will process the request and utilize existing plans and policies to fulfill the request.
- The host agency for a State communications asset is responsible for ensuring that a mission tracking number is assigned to the deployment, however, deployment is not delayed or dependent upon the assignment of this number. The absence of a mission tracking number may have a fiscal impact on the re-requesting and/or host agency.

#### Section 4.1.4 Request Process Flow Chart.



#### Section 4.1.5 Resource Tracking at the State Level.

The status of local and regional interoperable communications assets availability and use will be kept by the appropriate agencies and change of status notification will be made to the State EOC.

- It is the responsibility of the State Emergency Operations Center (SEOC) to notify the ESF-2 representative as to the deployment or availability of communications assets. State or regional communications asset operational readiness is provided to the SEOC by the host agency. The SEOC/ESF-2 representative will maintain a database of all identified resources and their operational status. The tracking of individual communications components will be done in accordance with the host agency's inventory control procedures.
- Requests for State level incident and tactical dispatch team personnel should be directed to the local EOC, who will use the process in Figure 21 to notify the SEOC of the request. The SEOC will direct the request to the ESF-2 representative who will contact the appropriate representative. Tracking of personnel assigned an incident/response will be in accordance with the Alabama response plan.

#### **Section 4.1.6 Resource Recovery.**

- As an incident demobilizes, it is the responsibility of the incident commander to notify all deployed communications assets when they are released from duty through the development of a Demobilization Plan. They will also notify the local EOC and R\_IT of the demobilization. The EOC or R\_IT will notify the SEOC ESF-2 representative who will update the resource database.
- Upon demobilization of assigned communications personnel, the incident commander will notify the local EOC and R\_IT. The EOC or R\_IT will notify SEOC ESF-2 representative who will update the resource database. Personnel will then be demobilized in accordance with the state procedures.

### **SECTION 4.2 PROCEDURE FOR RADIO CACHE REQUIREMENTS AND USE.**

*(Reference Section 3.1)*

#### **Section 4.2.1 Swap Radio (If Available)**

Swap radios are provided by one agency to give an assisting agency access to their radio system. Depending on the scope of the incident, and availability of radios, they may be issued to individual responders, or only to assisting team leaders.

- Rules of Use

Swap radios are governed by the issuing agency's rules. When issuing a radio, the user should be instructed as to which talk groups or channels are appropriate for his use.

- Interoperable Communications Request

Requests for swap radios should be made by the incident commander directly to the agency listed in Section 3.1. The request should include the requester's name, contact information, number of radios needed, and type of incident.

For a radio cache to be an effective shared resource, it should have the following characteristics:

- Be fully charged, maintained, and ready for deployment at all times
- Include extra charged batteries and chargers for extended deployments
- Personnel available to transport the radios to the incident scene
- Technicians available for on-scene support during the deployment
- Check-out and tracking procedures are used during the incident to ensure the radios are properly re-turned to the cache following the incident.

### **Section 4.2.2 Rules of Use.**

- National Incident Management System- Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource.
- Plain language - All Communications can be in plain language although a Standard Ten Code can be used (Reference Appendix C, Page 105). Acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as “help”, “assistance”, “repeat” and “back-up” may have different operational meanings to different agencies. The word “Help” should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request.
- Unit Identification - Agency name or identifier shall precede unit identifier.

### **Section 4.2.3 Procedure for Radio Cache Asset Request**

- When the Incident Commander has determined a situation exists that requires use of regional cache radio resources, requests for those resources are made through the host jurisdictions dispatch center.
- The dispatch center follows internal agency procedures to contact the County EOC and provides them the specific information (see C below) regarding the resource request.
- The County EOC will contact the R\_IT and relay pertinent information regarding the resource request and event if the R\_IT is activated, or the Regional Communications Coordinator if the R\_IT is not activated.
- The following information is provided by the requesting agency at the time of an activation request:
  - User’s agency
  - On-scene agencies requiring interoperability (Whom needs to talk with whom?)
  - Reason for request / type of event
  - Expected duration of event
  - Check in location
  - User/requestor contact phone number
- In the event that the agency activates its own radio cache, the County EOC and Region\_IT are notified and provided the above information.
- The R\_IT determines what regional interoperability resources are available for use, identifies a specific resource to meet the need and activates the appropriate resource.
- The R\_IT confirms the deployment by providing specifics of what resource are responding and the ETA and in-transit contact information for the resource to the Incident Commander or their designee back through the County EOC.

## **Section 4.2.4 Procedure for Radio Cache Mobilization and Demobilization**

### **Activation.**

- The Radio Cache Manager will provide an estimated response or activation time, which will be relayed to the dispatch center of the agency having jurisdiction over the event and the Incident Commander.
- The Radio Cache will be sent to the incident scene along with a knowledgeable technician who will be responsible for supporting the radios, including fully charged spare batteries.
- Each radio in the radio cache will have a unique identification number for inventory tracking.
- The technician will be responsible for keeping a list for the incident of each user to whom a radio has been distributed, the agency of the user and the identification number of the radio(s) provided to that individual.
- Each user and/or agency that has received a radio from the radio cache will be responsible for the return of that radio to the cache at the end of the incident.

### **Deactivation.**

- The Incident Commander determines when the regional interoperability asset is no longer required.
- The Incident Commander or Logistics Section Chief will be responsible for coordinating the return of cache radios to the Radio Cache Technician on-scene as part of the normal demobilization process.
- At the end of the incident, the Radio Cache Technician will be responsible for inventorying all radios returned to the cache. Before leaving the incident scene, the technician will determine if any radios have not been returned to the radio cache and note the user and/or agency to which the radio was distributed. This information will be provided to the Incident Commander or Logistics Section Chief. If the missing radios cannot be recovered at the incident scene, the technician will provide this information to the Radio Cache Manager for resolution.

### **Problem ID and Resolution.**

- Agencies using radio caches may report any problems with the specific radio cache to AEMA.
- AEMA will be responsible for ensuring effective resolution to problems that exist with interoperability resources.

## **SECTION 4.3 PROCEDURE FOR NPSPAC MUTUAL AID CALL AND TAC CHANNEL ACTIVATION**

Shelby County Tactical Interoperable Plan  
Public Safety Sensitive

## Overview of NPSPAC Channel Use

In accordance with the National Plan for 821-824/ 866-869 MHz and the Public Safety Radio Plan, and Federal Communications Commission, interoperability among federal, state, and local public safety entities, during both routine and disaster operations will take place primarily on the five common channels as identified in the national plan. Licensees may permit other entities to interoperate with the licensee's radio system. Such use should be in compliance with FCC Rules and Regulations. Through the use of S-160 or equivalent agreements, a licensee may permit federal use of a non-federal communications system. Such use, other than the five common channels, is to be in full compliance with the Commission's requirements for government use of non-government frequencies (Title 47 CFR, Sec .103).

- **State MA-CALL and MA-TAC1.** The State of Alabama provides Mutual Aid CALL and Mutual Aid TAC1 across the state to all eligible agencies that own and operate 800 MHz radio equipment. These channels may be used for mutual aid operations when there is a large-scale incident, when no other MA-TAC channel is available, or when an incident is moving across county/city jurisdictions.
- **Local MA-TAC2, 3, and 4.** Similar to the State MA-CALL and MA-TAC 1 channels, county/city agencies provide MA-TAC 2, 3, and/or 4 within their respective jurisdictions but not necessarily in /ever county/city agency throughout Alabama.
- The field unit notifies the NCC that the local dispatch center has assigned a Mutual Aid-TAC channel. Each NCC should know where the local mutual Aid TAC repeaters are within their jurisdictional responsibility and what area(s) they cover. This will become most important if a second mutual aid incident arises. Coordination between dispatchers to select the right MA-TAC channel is vital to each specific incident. These MATAc channels usually cover smaller areas (i.e., a county/city area in comparison to State mutual aid channels). There are not as many overlapping repeaters on these MA-TAC channels such as those of the State MA-CALL and MA-TAC1 channels. Each county/city that implemented MA-TAC2, 3, and/or 4 has control of them. They are not controlled by the state. Each County/city dispatch center controls the Enable and Disable function in its console and has the responsibility to Enable and Disable them at the console level. The State RCC cannot assist with Mutual Aid TAC2, 3, or 4 repeaters.
  - All repeaters need to be in the Disabled mode at all times. Accordingly any unit transmitting on the mutual aid channels will be heard by the associated NCCs. This is due to the console design. It is when two or more field units need to talk to each other on a mutual aid channel that the dispatcher needs to enable the repeater. Otherwise, the units will not hear each other and can only hear the dispatcher. An exception to repeater use will be when two or more field units are in close proximity of each other; this allows mutual aid Direct (or talk-around) communications.

- If a moving incident takes units into an area where coverage poses a threat and an agency helicopter equipped with an 800 MHz public safety radio is assisting in the incident, the ground unit and the helicopter can go onto Direct (or talk-around) mode. The agency helicopter can, in turn, relay information between the ground units and the dispatcher on the repeater channel. The Direct (or talk-around) mode should only be used on the MA-TAC channels.

### **Section 4.3.1 Procedure for NPSAC Mutual Aid Call and TAC Channel Use**

- The Mutual Aid Channels in the region will be reserved for inter-communication in situations requiring the coordination of multiple public safety entities. They shall not be used for administrative or intra-agency communications unless so directed during a major emergency disaster situation.

#### Examples of Proper Use of the Mutual Aid Channels.

- As working channels for multiple fire departments fighting a fire together.
- For coordination during a police chase through multiple jurisdictions where the agencies have no other communications link with each other.
- For Communications during extended joint operations between multiple police agencies such as drug operations, riots, etc.
- For coordination during recovery operations after a disaster such as a hurricane when local, state, and federal officials require a common communications link.

#### Examples of Improper Use of the Mutual Aid Channels.

- To support the administrative functions of a fire department which has a mutual aid agreement with an adjacent fire department to provide “move up” capability when a fire unit leaves its own coverage area.
- To provide an extra working channel for a public safety agency supporting a special event.
- To provide a surveillance channel for use between members of the same public safety agency.

#### National rules of use.

- National Incident Management System- Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability re-source.
- Plain language - All Communications should be in plain language although a standard Ten Code can be used (Reference Appendix C). Acronyms and abbreviations are

to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as “help”, “assistance”, “repeat” and “back-up” may have different operational meanings to different agencies. The word “Help” should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request.

- Unit Identification - Agency name or identifier shall precede unit identifier.

### NPSPAC Mutual Aid Frequencies

Name	Description	Frequency	CTCSS
I-CALL/National CALL	NPSPAC Calling Channel	866.0125/821.0125	156.7
I-TAC1/National TAC1	NPSPAC Tactical 1	866.5125/821.5125	156.7
I-TAC2/National TAC2	NPSPAC Tactical 2	867.0125/822.0125	156.7
I-TAC3/National TAC3	NPSPAC Tactical 3	867.5125/822.5125	156.7
I-TAC4/National TAC4	NPSPAC Tactical 4	868.0125/823.0125	156.7

#### Definitions

- **Cluster** – When more than one repeater site collectively covers a large geographic area that can include more than one county / city, or parts thereof, the result is a cluster. It may cover all or encompass portions of adjoining counties / cities. This is why enabling and disabling repeater functionality is critical to a successful mutual aid operation.
- **Mutual Aid CALL** – A frequency pair is assigned to Mutual Aid CALL (I-CALL) and is reused across the state as well as the nation. It is the same frequency pair no matter where you are. I-CALL normally operates strictly in the repeater disabled mode and is sometimes referred to as the “Hailing” channel. Regardless of what NCC(s) may exist in an area, one should hear hails on the I-CALL channel with the local or back-up NCC responding.
- **Mutual Aid TAC1/National TAC1** – A frequency pair is assigned to Mutual Aid TAC1 (I-TAC1) that is reused across the state as well as the nation. It is the same frequency pair no matter where you are. It is used as a tactical or operational channel when adjoining counties/cities need to share communications. Although I TAC1 normally operates in the repeater disabled mode, it can be put into the enabled mode for wide area mobile communications. I-TAC1 meets needs across multiple local jurisdictions.
- **Mutual Aid National/TAC2, 3 and 4** – Like I-TAC1, a unique frequency pair is assigned to each I-TAC2, 3, and 4 channel and is reused across the state as well as the nation. It is the same frequency pair no matter where you are. It is used as a tactical or operational channel when adjoining counties/cities need to share communications. Although I-TAC2, 3, and 4 normally operate in a repeater disabled mode, they can be put into enabled mode for wide area mobile communications. These channels are tailored to meet communications needs within local jurisdictions.

#### Section 4.3.1a MA-CALL Use

MA-CALL shall be left in the repeater disabled mode. In an emergency, if appropriate, MA-CALL may be left in enabled mode.

Any 800 MHz radio user may hail on MA-CALL.

It will be the responsibility of the primary Network Control Center (NCC) to respond to the unit that is calling in the cluster.

If the primary NCC is unable to respond, the back-up NCC (usually a State RCC) will respond to the unit that is calling in the cluster. Other back-up NCCs may participate as determined on a case-by-case basis.

MA-CALL shall be monitored at all times, 24 hours a day, 7 days a week by the primary and backup NCC.

#### **Section 4.3.1b MA-TAC1 Use**

MA-TAC1 should be in the repeater Disabled mode.

When a unit hails on MA-CALL and it is determined that a large-scale (or multi-cluster) mutual aid incident is going to take place or no other MA-TAC channel is appropriate or available, the dispatcher will advise the units involved to select MA-TAC 1.

The NCC may enable the MA-TAC repeater as required for unit-to-unit communications.

When the incident is over or requires communications through another cluster, the NCC will disable the repeater in conjunction with the adjoining NCC Enabling their repeater as necessary.

The primary NCC can request assistance from the State RCC to Enable and Disable the MA-TAC 1.

The NCC shall coordinate in advance with the adjoining primary NCC when the moving incident is anticipated to require communications on MA-TAC 1 in the adjoining cluster.

The field unit notifies NCC once the assigned MA-TAC channel is no longer needed.

The NCC ensures the repeater is Disabled and makes it available for the next assignment.

Direct (or talk-around) communications on MA-TAC1 may be used when two or more units are in close proximity of each other.

#### **Section 4.3.1c State Assistance/Control Procedures.**

Assistance/control from the State Regional Communications Center

(RCC) may be requested under the following conditions.

- The moving incident can no longer be operated or monitored by the originating agency and the primary NCC cannot hand over the incident to the successive primary NCC of the moving incident, or
- The incident (moving or stationary) is such that it would benefit from assistance control of the RCC.
- Sufficient lead-time and briefing for the RCC is provided.

Given I, II, or III above, the RCC will assume control of the mutual aid channel as the lead dispatcher throughout the remaining duration of the incident.

The RCC will Enable and Disable the mutual aid repeater as the moving incident moves in and out of the repeater areas (a.k.a., clusters).

The RCC may invoke “supervisory takeover” as the lead dispatcher, which will inhibit transmitting and repeater Enable/Disable by the primary NCC of each respective cluster.

Control handed over to the RCC will carry over to any and all successive NCC areas without the need to re-acquire control from successive NCC areas.

The RCC will relinquish control when mutually beneficial to the incident, the RCC, and primary NCCs.

#### **Section 4.3.1d MA-TAC2, 3 and 4 use.**

MA-TAC2, 3, and 4 should be in the repeater Disabled mode.

When a unit hails on MA-CALL, the dispatcher will advise the units involved to select the appropriate MA-TAC channel.

The NCC may enable the assigned MA-TAC repeater as required for unit-to-unit communications.

When the incident is over or requires communications through another cluster, the NCC will disable the repeater in conjunction with the adjoining NCC Enabling their repeater.

The NCC shall coordinate in advance with the successive primary NCC when the moving incident is anticipated to require communications on a MA-TAC channel in the adjoining cluster as necessary.

NCC controls the activity for the duration of the incident on the MA-TAC channel assigned.

The field unit notifies the NCC once the assigned MA-TAC channel is no longer needed.

The NCC ensures the repeater is Disabled and makes it available for the next assignment.

Direct (or talk-around) communications on MA-TAC1 may be used when two or more units are in close proximity of each other.

#### **Section 4.3.1e Dispatchers – Disable the repeaters when the incident is done.**

If you are monitoring the mutual aid channels and you can hear units communicating, do not hesitate to ask the units to identify themselves if you are unaware of authorization to use the channel(s). If you do not get a response, ask again. If you continue to hear communications, call your adjoining NCCs to identify the use of the mutual aid channel(s) where communication may be bleeding over. Officer safety may be compromised if the channel(s) are inadvertently disabled or otherwise altered. If unauthorized traffic is being passed, the primary or back-up NCC can disable the repeater to halt its use. Follow-up activity by the NCC taking action should ensure to ensure future unauthorized use is mitigated.

#### **Section 4.3.1f Problem ID and Resolution.**

The dispatch center having jurisdiction over the location of the incident reports any problems experienced to AEMA or RCC.

The AEMA or RCC will be responsible for ensuring effective resolution to problems that exist with interoperability resources.

### **SECTION 4.4 PROCEDURE FOR VHF AND UHF SHARED FREQUENCIES USE. (*Reference Section 3.2*)**

The Mutual Aid Channels in the region will be reserved for inter-communication in situations requiring the coordination of multiple public safety entities. They shall not be used for administrative or intra-agency communications unless so directed during a major emergency disaster situation.

#### **Section 4.4.1 Examples of Proper Use of the Mutual Aid Channels.**

- As working channels for multiple fire departments fighting a fire together.
- For coordination during a police chase through multiple jurisdictions where the agencies have no other communications link with each other.
- For Communications during extended joint operations between multiple police agencies such as drug operations, riots, etc.
- For coordination during recovery operations after a disaster such as a hurricane when local, state, and federal officials require a common communications link.

#### **Section 4.4.2 Examples of Improper Use of the Mutual Aid Channels.**

- To support the administrative functions of a fire department which has a mutual aid agreement with an adjacent fire department to provide “move up” capability when a fire unit leaves its own coverage area.
- To provide an extra working channel for a public safety agency supporting a special event.
- To provide a surveillance channel for use between members of the same public safety agency.

#### **Section 4.4.3 Rules of use.**

National Incident Management System (NIMS) - Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource.

Plain language - All Communications should be in plain language although a Standard Ten Code can be used (Reference Appendix C). Acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as “help”, “assistance”, “repeat” and “back-up” may have different operational meanings to different agencies. The word “Help” should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request.

Unit Identification - Agency name or identifier shall precede unit identifier.

#### **Section 4.4.4 Mutual Aid Channel Use.**

- If an individual responder needs to talk to an agency with which they do not otherwise have communications, the responder notifies dispatch that they need to operate on one of the interoperability channel. Dispatch coordinates with AEMA and determines the appropriate channel/frequency.

- For an extended incident, the dispatcher is responsible for notifying AEMA that an interoperability or mutual aid channel is in use.
- When a responder is dispatched to an incident, each agency dispatcher is responsible for notifying responders what interoperability channel or channels are being used for the incident.
- The Incident Commander determines when the interoperability or mutual aid channel(s) is (are) no longer required and notifies his/her dispatch center.
- The dispatch center having jurisdiction over the location of the incident notifies each responding agency that operations on the channel are ending.

#### **Section 4.4.5 Problem ID and Resolution.**

- The dispatch center having jurisdiction over the location of the incident reports any problems experienced to AEMA or RCC.
- AEMA and RCC are responsible for ensuring effective resolution to problems that exist with interoperability resources.

### **SECTION 4.5 PROCEDURE FOR FIXED SITE GATEWAYS ACTIVATION AND USE. *(Reference Appendix F)***

- This procedure provides guidance on activation and use of the radio communication gateways for Shelby County to request interoperable communications between local, state, and federal agency commanders during emergency incidents.

Fixed gateways are used to connect radio systems using different frequencies and technologies. For example, VHF and UHF frequencies can be patched, so agencies who cannot communicate directly can communicate through the gateway.

#### **Section 4.5.1 Participating Agencies.**

- **Section 3.3 Gateway Inventory**, lists the county, agency, type of gateway, quantity of gateways and an identification of whether the gateway is located at a fixed site or is mobile.

#### **Section 4.5.2 Gateway Activation Request.**

- A radio user requiring direct communications with a user from a different agency shall follow their own agency's procedures for requesting connectivity and this SOP. Typically, a user should request a patch by contacting their own agency's dispatcher, who will then contact the other agency(s) dispatchers. This will require

coordination between dispatch centers that are control points (i.e., City of Birmingham, Jefferson County, Talladega County) for enabling interoperability. The contact between agencies may involve communications over the user's home talk group, a mutual aid calling channel, or other resources as directed by agency policy.

- When requesting interoperable communications, the user should be prepared to provide the following information, as appropriate.
  - Your agency name.
  - Your name or call sign/designator.
  - Person or agency with whom you wish interoperable communications.
    - Reason for requesting interoperability.
    - Estimated time of use, if possible.

### **Section 4.5.3 Fixed Gateway Activation.**

- Once authorization has been granted from your agency, each agency should follow their internal procedures for activating the connectivity.
- Procedures for establishing communications connectivity include:
  - Selection of a channel or talk group on your home system if necessary.
  - Verify system-wide availability of required resources – coordination among control point dispatchers.
  - Providing radio call sign/designator information to connected agencies as needed.
  - Assigning the requested unit/agency to that channel or talk group.
  - Utilizing your agency's internal procedures for establishing a patch between the agencies.
  - The control point dispatcher will connect the agency to the appropriate talk group.
  - Announce to users that interoperability is activated.
  - Users should mark up on the interoperability channel using their agency name and unit identifier.
  - The dispatcher for the jurisdiction where the event is being worked shall monitor the interoperability channel to address requests.

### **Section 4.5.4 Gateway Deactivation.**

- When the interoperable communications connection or patch is no longer required, agencies should follow these deactivation procedures:
  - The requesting agency/user or incident commander where the emergency event occurred shall contact their dispatcher so that the patch can be deactivated.

- If the connection does not include units from the control point dispatch jurisdictions, the requesting agency/user shall contact the control point dispatcher to deactivate the patch.
- The control point dispatcher shall make an announcement on the interoperable channel/talk group indicating that the connection will be deactivated prior to the connection being disabled.
- All personnel shall return to their appropriate home system channel assignments.

#### **Section 4.5.5 Rules of Use.**

- The following rules of use shall govern interoperable communications between agencies:
  - Connectivity between agencies shall only be requested for working emergency events as defined by the SOP Interoperability Committee.
  - Agencies will identify themselves by agency name and designated call sign/radio designator. For example, if “505” from the FBI has requested communications with Birmingham Police Department “X-Ray 32,” and a patch has been established, then “FBI 505” will call “Birmingham PD X-Ray 32” on the designated channel/talk group.
  - All radio traffic should be in plain language although a Standard Ten Code can be used (Reference Appendix C). The use of specific agency acronyms is discouraged.
  - All encrypted radio users will be required to work in the “clear” mode.
  - During emergency events with multiple agencies, the designated incident commander, may limit the interoperable channel/talk group to command level staff.
  - The requesting agency’s dispatcher should monitor the radio traffic between units and then advise the control point when the patch can be deactivated.

**Note:** Interconnecting encrypted and non-encrypted channels on a gateway can compromise operations or allow sensitive information to be intercepted because it is difficult to ensure all encrypted channel users are aware of when there are interconnections to non-encrypted channels. An encrypted channel user can mistakenly believe that their communication is secure, when in fact the communication is being broadcast in the clear over a non-encrypted channel through a gateway connection. For this reason, the default policy will be that encrypted channels will not be used where non-encrypted channels are being interconnected with a gateway.

#### **Section 4.5.6 Problem ID and Resolution.**

- The Gateway Manager reports any problems experienced during the deployment to the Gateway provider.
- The Gateway Manager immediately reports any problem with activation of interconnects to the Incident Commander, AEMA and RCC.

#### **Section 4.5.7 Limitations.**

- The interoperability provided through the Gateway has the ability to link participating agencies but has the following limitations:
  - The number of simultaneous patches that can be supported by the Gateways will be limited by switch capacity and the number of lines connecting control centers and consoles. There are a maximum of two lines connecting a switch to any other switch, and a maximum of four lines connecting control center consoles to the respective co-located switch. As a result, a limited number of patches involving resources at different control points can be supported simultaneously. Like-wise, a limited number of patches involving resources that are accessed through a communications center console may be supported simultaneously.
  - Home system coverage may limit communications: If agencies gain connectivity through one of the control points, agencies will only maintain interoperable communications when in their home system coverage area.
  - Agencies not included in the list of participating agencies will require additional planning to establish interoperable communications: Agencies not included in the table cannot establish direct interoperable communications with the Gateway connected agencies without additional planning.

#### **Section 4.5.8 Test Procedures.**

- To ensure that equipment components of the interoperability solution are operating properly, each agency will participate in the following testing procedure:
  - A radio roll call will occur every month at 09:00 hour on a predetermined channel/talk group.
  - Each agency will enable the connectivity prior to the 09:00 hour roll call.
  - Beginning at 09:00 hour, a control point dispatch center will initiate roll call by contacting each agency by name.

- Each agency shall respond when called.
- Dispatch personnel shall document and maintain a check list of agency responses for each roll call.
- After the roll call list is complete, the control point dispatcher shall attempt to contact each non-responsive agency one additional time.
- The control point dispatcher will make an official announcement, via radio, that the test is complete.
- Each dispatcher will deactivate the connectivity after roll call is complete.
- Agencies that do not respond to the roll call will be contacted by the control point dispatcher by phone to attempt to identify any issues or problems that precluded their participating in the test.
- If the issue or problem can be identified, dispatch personnel should agree on who shall take corrective action. If the issue or problem cannot be identified, the control point dispatcher shall con-tact the appropriate technical personnel to address the issue or problem.

## **SECTION 4.6 PROCEDURE FOR MOBILE GATEWAY DEPLOYMENT AND USE**

This procedure provides guidance about how to request, deploy, and use the mobile Gateways during emergency responses in the Regional area.

### **Section 4.6.1 Interoperable Communications Request.**

- When an emergency response event requires a mobile gateway to perform interoperable communications, a partnering agency representative shall follow their own agency's procedures and this SOP for requesting equipment. Typically, a user should request a mobile gateway by contacting their agency's dispatcher, who will then contact the appropriate agency. This may involve communications over the user's home system, a mutual aid calling channel, or other resources as directed by agency policy.
- When requesting interoperable communications, the user should be prepared to provide the following information, as appropriate:
  - Your agency name.

- Your name.
- Reason for requesting interoperability.
- Description of the incident.
- Estimated time of use, if possible.

#### **Section 4.6.2 Deployment Procedure.**

Upon receiving a request for the deployment of a mobile gateway, the following guidelines should be followed.

- The dispatcher should follow these deployment procedures for deploying local assets:
  - Contact the on-call mobile gateway operator/technician responsible for mobile gateway deployment.
  - Dispatch mobile gateway operator to the incident scene.
  - Inform the requesting user that the mobile gateway is enroute and the ETA.
  - When requesting regional assets, the protocol for requesting regional assets should be used.
- The mobile gateway operator should follow these deployment procedures:
  - Respond to dispatcher with estimated time to retrieve mobile gateway and estimated time to arrive on the incident scene.
  - Ascertain the location where check in should occur, and to whom they should check in with.
  - Drive the dedicated vehicle and mobile gateway to the incident scene.
  - Report to the check in recorder for assignment and supervisor on arrival.

#### **Section 4.6.3 Gateway Activation.**

The mobile gateways will probably not be outfitted with agency radios before the event. Therefore, all agencies will be required to bring a portable radio to connect to the mobile gateway for the length of the operation. Setup and installation of all radios will occur on-scene. Agencies are also responsible for providing additional power supplies (i.e. spare batteries, chargers) for portable radios, as battery life limits us-ability of the radio (see Limitations below).

- The Incident Commander, through the COML, should initiate these procedures:
  - Require participating agencies to check in at the command post and provide portable radios and frequency/talk group channels for use during the incident.
  - Assign radio call sign/designator information to connected agencies.

- Instruct mobile gateway operator on where to setup and operate the mobile gateway.
- Inform mobile gateway operator what agencies are participating.
- Provide mobile gateway operator with agency provided radios and frequency/talk group channels to be used during the incident.
- Confer with mobile gateway operator on what command level or other specific talk groups that need to be programmed into the mobile gateway.
- The mobile gateway operator should follow these procedures:
  - Obtain agency radios and connect to mobile gateway with associated cables.
  - Select the channel or talk group assigned by the agency.
  - Assign the requested unit/agency to that channel or talk group as designated by the COML or Incident Commander.

**Section 4.6.4 Gateway Deactivation.**

- When interoperable communications is no longer required, agencies should follow the guidelines established in this SOP. Participating agencies are responsible for retrieving the portable radios provided during the operation.
- The Incident Commander, through the COML, if established, should follow these deactivation procedures:
  - Make an announcement on the command channel to all commanders to advise them the mobile gateway is being deactivated.
  - Contact the mobile gateway operator to shut down the mobile gateway.
- The mobile gateway operator should follow these deactivation procedures:
  - Ensure agencies retrieve portable radios and they are signed for.
  - Take inventory of equipment and note any equipment needing repair or replacement.
  - Return to pre-response location and make mobile gateway ready for service.

**Section 4.6.5 Rules of Use.**

- The following rules of use shall govern interoperable communications between agencies:
  - Connectivity between agencies shall only be requested for working emergency events.
  - Agencies will identify themselves by agency name and designated call sign/radio designator. For example, if “505”



from the FBI has requested communications with Birmingham Police Department “X-Ray 32,” and a patch has been established, then “FBI 505” will call “Birmingham PD X-Ray 32” on the designated channel/talk group.

- All radio traffic should be in plain language. The use of specific agency acronyms is discouraged.
- All encrypted radio users will be required to work in the “clear” mode.
- Agencies are encouraged to work in the simplex mode.
- Interoperability is essential for team and unit leaders to communicate directly with assigned personnel and is encouraged between command level personnel as a priority, and then between division and group supervisors and subordinate leaders.

**Note:** Interconnecting encrypted and non-encrypted channels on a gateway can compromise operations or allow sensitive information to be intercepted because it is difficult to ensure all encrypted channel users are aware of when there are interconnections to non-encrypted channels. An encrypted channel user can mistakenly believe that their communication is secure, when in fact the communication is being broadcast in the clear over a non-encrypted channel through a gateway connection. For this reason, the default policy will be that encrypted channels will not be used where non-encrypted channels are being interconnected with a gateway. If a secure encrypted channel is an operational necessity, then alternative means of achieving that should be developed, such as sharing a local encrypted radio channel through the use of swap radios from the local cache.

#### **Section 4.6.6 Problem ID and Resolution.**

- The Gateway Manager reports any problems experienced during the deployment to the Gateway provider.
- The Gateway Manager immediately reports any problems with activation of the interconnects to the Incident Commander, AEMA and RCC.

#### **Section 4.6.7 Limitations.**

- The interoperability provided through the mobile gateways has the ability to link participating agencies but has the following limitations:
  - Battery life of portable radios limit time of use: Mobile gateways are designed to enable interoperable communications for short duration events or until a mobile command vehicle arrives. In the

event that the mobile gateways will need to be used for an extended period of time, precautions such as an additional power supply, personal radio chargers, or other provisions should be considered.

- Home system coverage may limit communications: Access to repeaters of an agency's home system while enroute to or while on the scene of the incident will be dependent on the coverage of their home system. Alternate methods of communication (e.g., frequency sharing, use of a cellular phone) may be required to communicate with your agency's home system if you are outside coverage of your home system.
- Interoperability connectivity needs to be planned in advance. For agencies to have interoperability on the scene of an incident they would need to have provided a portable radio in advance or provide one on the scene of the incident.

#### **Section 4.6.8 Test Procedures.**

- To ensure that equipment components of the interoperability solution are operating properly, each agency will participate in the following testing procedure:
  - Representatives from each agency should meet on a regular basis to test the interoperability solution.
  - Testing should include deployment, setup operation, and deactivation of the mobile gateway. Agency representatives should arrive at the test location to test their ability to communicate with other agencies utilizing the mobile gateway.
  - If an issue or problem is identified during the testing procedure, personnel shall determine who will take corrective action. If the issue or problem can not be identified, personnel shall contact the appropriate technical personnel to address the issue or problem.

### **SECTION 5 PROCEDURE FOR SHARED CHANNELS/SYSTEMS USE.** *(Reference Appendix D)*

- Technology Overview

Shared channels/systems permit interoperable communications among agencies that use the same radio band. **Refer to Section 3.2.**

- Procedures

Shelby County agencies should program shared channels/systems listed in Section 3.2 of this document that are appropriate for their discipline.

- Technology Overview

Shared systems are used by agencies to facilitate their intra-agency and inter-agency communications in a geographic area. In Shelby County, the primary shared system is Shelby County Sheriff's Office. This system is used Countywide.

Shared channels/systems are to be used under the terms and conditions of interagency agreements and according to the policies and procedures of the responsible authority having jurisdiction that holds the FCC license for the radio system.

Rules of Use.

- National Incident Management System- Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource.
- Plain language - All Communications should be in plain language although a Standard Ten Code may be used (Reference Appendix C). Acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as "help", "assistance", "repeat" and "back-up" may have different operational meanings to different agencies. The word "Help" should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request.
- Unit Identification - Agency name or identifier shall precede unit identifier.

Operational Considerations.

- The Incident Commander/Unified Command is responsible to assure the communications plan for their incident is developed. The COML should work with the Section Chiefs to determine the communications needs of responding agencies given their specific work assignments. A plan that allows effective communications should be developed, approved by the IC/UC and implemented.
- If, while responding, an individual responder needs to talk to an agency with which they do not otherwise have communications, the responder notifies their dispatch that they need to operate on a shared channel/talk-group. Their dispatch coordinates with the system provider to determine the appropriate channel/talk-group to be used.
- For an extended incident, the dispatcher is responsible for notifying AEMA that an interoperability channel/talk-group is in use.
- When a responder is dispatched to an incident, their agency dispatcher is responsible for notifying responders what interoperability channel(s)/talk-group(s) they are to use for the incident, if known. If not known, the information will be provided to them during check-in at the incident.

- The Incident Commander determines when the interoperability channel/talk-group is (are) no longer required and notifies his/her dispatch center.

Problem ID and Resolution.

- The dispatch center having jurisdiction over the location of the incident reports any problems experienced to AEMA or RCC.
- AEMA and RCC are responsible for ensuring effective resolution to problems that exist with interoperability resources.

**Section 6: Levels of Interaction**

Multiple levels of interaction occur among public safety disciplines and jurisdictions. This section defines the levels of intra-agency “operability” and interagency “interoperability” that occur for each major public safety discipline.

Public safety communications are defined in the area of operability, and the following three areas of interoperability based on their internal and external interactions:

- Day-to-Day**
- Joint Task Force**
- Mutual Aid**

This document focuses on interoperability of wireless communications, but it also recognizes that public safety agencies must first have operability before they will be able to address interoperability.

Users estimate 90 percent of all public safety land mobile radio (LMR) usage is for day-to-day situations. “**Day-to-Day**” interoperability requirements surface when a city police officer must communicate with a county sheriff deputy, for example, and interoperable wireless communications are a requirement. Another example might be a public safety response to a life-threatening traffic accident in which first responders of all three disciplines respond and require the ability to intercommunicate with each other.

The “**Joint Task Force**” category refers to the operations of multiple public safety agencies working on a focused activity, such as a Joint Terrorism Task Force in which wireless communications must be highly coordinated and interoperable. The other distinct form of task force is used by a single agency to define a particular effort, such as a fire regulations task force in which other agencies are not involved in the effort and interoperable communications are not required.

The “**Mutual Aid**” category addresses Local Mutual Aid Agreements, Alabama Mutual Aid System Members, and Emergency Management Assistance Compact relationships agreed to by city mayors, county commissioners/supervisors, or state governors to provide additional coordinated resources for joint combat of emergencies or disasters. Joint response requires wireless interoperability to support coordinated resources.



## Section 7 Plans for Tactical Communications during an Incident

### Section 7.1 Participating Functional Disciplines

This plan applies to law enforcement, firefighting, emergency medical services, emergency management, and homeland security disciplines. First responders will include county and municipal agencies, followed by state agencies and mutual aid resources.

### Section 7.2 Plan Purpose

The purpose of Tactical Interoperable (I/O) Communications is to provide voice communications between the State of Alabama (and related state agencies), federal, county and local responders to disasters, using the responders own radios (when possible).

This will be accomplished using pre-programmed and coordinated frequencies. The VHF frequencies will be readily available to all, using simplex. The UHF frequencies are repeater pairs and will operate using portable repeaters or in simplex mode on talkaround.

These frequencies and frequency pairs should be used only for inter-agency coordination such as tactical communication, as it tests radio programming, and reinforces proper usage with first responders.

These frequencies are not intended to be used for routine purposes such as dispatching.

#### Shelby County Assignment of Mutual Aid Channels

If all applicable agencies share communications on a common frequency to support the incident, the following frequency assignments should be used unless otherwise directed by the Incident Commander. Shelby County does not use 800 or UHF on a daily basis. The Calling channel VCALL10 is used by first responders approaching the scene to receive an assignment or staging location. Units will be instructed which tactical frequency to use for their discipline.

#### Frequency Assignments

Priority User ALL RESPONDING UNITS	VHF Channels
Calling Channel	VCALL10 (155.7525) Tx/Rx 156.7

Priority User FIRE	VHF Channels
Tactical	VFIRE 21 (151.1375) Tx/Rx 156.7
Tactical	VFIRE 22 (154.4525) Tx/Rx 156.7
Tactical	VFIRE 23 (158.7375) Tx/Rx 156.7

Priority User LAW		VHF Channels	
Tactical		MALE (Old State) (155.01) Tx/Rx 156.7	
Tactical		VLAW 31 (National Law) (155.475) Tx/Rx 156.7	
Tactical		VLAW 32 (155.4825) Tx/Rx 156.7	
Priority User HLS Repeaters	Rx Frequency	Tx Frequency	Rx PI / Tx PI
HLS North	153.8825	155.5425	156.7 / 156.7
HLS Mobile	158.9325	156.1875	156.7 / 156.7
HLS West	156.0675	156.7675	156.7 / 156.7

### Section 7.3 Concept of Operations

There will be a standard set of frequencies available and programmed into responder's radios. These interoperable (I/O) frequencies will be coordinated statewide and available for use during disasters. These frequencies are simplex and repeater pairs. This method will allow responders to communicate on common frequencies at any disaster site without the need of a repeater.

Fixed and/or mobile Gateway equipment will be available to connect individual radio systems together on site. This method will allow responders to use their existing simplex frequencies programmed into their radios and allow system interoperability. Gateways are located at the:

- Shelby County Sheriff's Office, fixed unit
- City of Pelham, fixed unit
- Pelham Fire Department, mobile unit

I/O frequencies will be programmed into appropriate state vehicle radios, responder's radios, and county EMA offices to allow point to point communication. A UHF repeater is available on each of the seven regional vehicles to provide immediate communications at the disaster site. **(Reference Appendix B)**

### Section 7.4 Levels of Support

Three typical scenarios are listed below. The levels of support are tied to the intensity of the disaster, the number of responders and the availability/condition of the normal (local) communications systems.

#### **Local Support: Unincorporated, City, Municipality**

A local disaster involves only local responders that will use their normal communication procedures and utilize the Mutual Aid frequencies. Communication that can be handles on simplex frequencies. Incident Command can achieve communication direct WT to WT under daily local events. If this is not adequate, the regional vehicle supporting the area will be dispatched and provide temporary support. This procedure must be followed to request State resources. The procedure is to contact

Shelby County EMA and request the resource. Shelby County EMA will request the resource from the State EMA with our EMIT's program, which will assign a mission number.

**Regional Disaster Support:**

A Regional disaster will use the regional vehicle. If this is not adequate, additional regional vehicles will be dispatched to the scene.

**Larger Scale Disaster Support:**

AEMA will provide additional equipment as needed/available when the local and regional resources are expended.

**Section 7.5 National Incident Management System/Incident Command System**

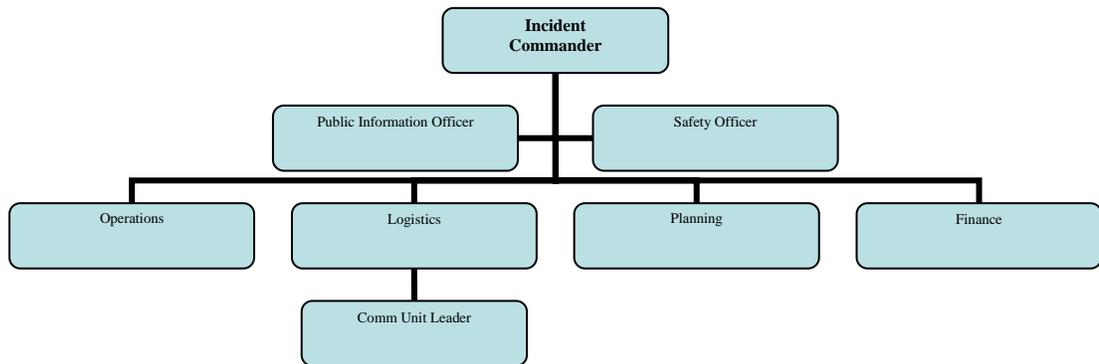
In accordance with federal and state requirements, all response agencies will use the National Incident Management System/Incident Command System (NIMS/ICS). These systems require a common, yet flexible organizational structure, to facilitate the effectiveness of response operations involving personnel from various agencies and disciplines.

Just as NIMS/ICS is scalable to incident size, radio nets will also be established as needed to support the incident. For example, a small incident may remain on the agency's primary channel, or one designated channel for all sections. A large incident with many responders and utilizing ICS sections may have a channel designated for each section. For Example, Operations may have channels assigned for law enforcement, fire, and EMS operations, as needed to support the incident.

The Communications Section will complete an ICS 205 OS Form, Incident Radio Communications Plan (Appendix G) to indicate which sections or response functions are assigned to which channels or talkgroups.

The following sections list possible channel or talkgroup assignments for incident management. The selection of specific channels or talkgroups will be made by the Communications Unit Leader at the incident, based on the availability of radios and frequencies, and the demands of the incident.

## Command Net



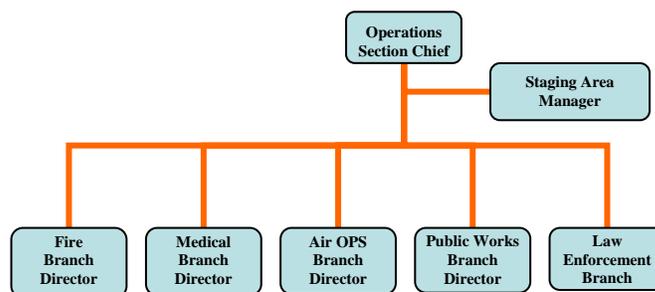
The Command Net provides communications among the General Staff and Command Staff at an incident. Depending on the availability of radios and the location of the incident, these operations will likely be conducted on a shared channel. For an incident in Shelby County, **(VFIRE/VLAW)** would be the selected channel for Command Net.

<b>Priority User ALL RESPONDING UNITS</b>		<b>VHF Channels</b>
<b>Calling Channel</b>	<b>VCALL10</b>	<b>Rx 155.7525 CSQ / Tx 155.7525 PI 156.7</b>
<b>Command Net Assignment (Regional, etc.) FIRE</b>		
<b><u>County/City/Agency</u></b>	<b><u>Command Net</u></b>	<b><u>Frequency</u></b>
<b>Shelby</b>	<b>VFIRE 21</b>	<b>Rx 151.1375 Tx 151.1375 PI 156.7</b>
	<b>VFIRE 22</b>	<b>Rx 154.4525 Tx 154.4525 PI 156.7</b>
	<b>VFIRE 23</b>	<b>Rx 158.7375 Tx 158.7375 PI 156.7</b>
<b>Command Net Assignment (Regional, etc.) LAW</b>		
<b><u>County/City/Agency</u></b>	<b><u>Command Net</u></b>	<b><u>Frequency</u></b>
<b>Shelby</b>	<b>MALE (Old State)</b>	<b>Rx 155.0100 Tx 155.0100 PI 156.7</b>
	<b>VLAW31 (National Law)</b>	<b>Rx 155.4750 Tx 155.4750 PI 156.7</b>
	<b>VLAW 32</b>	<b>Rx 155.4825 Tx 155.4825 PI 156.7</b>

<b>Command Net Assignment (Regional, etc.) Homeland Security</b>		
<b><u>County/City/Agency</u></b>	<b><u>Command Net</u></b>	<b><u>Frequency</u></b>
<b>Shelby</b>	<b>HLS North</b>	<b>Rx 153.8825 PI 156.7 / Tx 155.5425 PI 156.7</b>
	<b>HLS Mobile</b>	<b>Rx 158.9325 PI 156.7 / Tx 156.1875 PI 156.7</b>
	<b>HLS West</b>	<b>Rx 156.0675 PI 156.7 / Tx 158.7675 PI 156.7</b>

**Operations Net**

The Operations Net provides communications among Operations Section Staff at an incident. It will be assigned by the Communications Unit Leader or Incident Commander (which falls under Logistics).



**The Incident Commander will coordinate the following nets as needed.**

**Discipline Specific Nets**

Within the Operations Section, Discipline Specific Nets may be necessary to support incident response. Primary response disciplines are law enforcement, firefighting, and emergency medical services.

**Planning Net**

The Planning Net provides communications among the Planning Section Staff at an incident.

**Logistics Net**

The Logistics Net provides communications among the Logistics Section Staff at an incident. This is where the Communication Leader will be located.

**Finance Net**

The Finance/Administration Section is the last ICS section likely to be activated at an incident. Finance operations will likely be handled by personnel working at their regular duty station. Communications between the scene and the Finance Section may be conducted by telephone or existing radio systems.

## **FALLBACK COMMUNICATIONS METHODS.**

The following fallback methods will be used when no technical solution exists for interoperable communications:

- Co-location – Locating staff from all relevant agencies in a common area to receive and relay information face-to-face.
- Runners – Using personnel to relay written messages (ICS Form 213) between agencies.
- Joint Teams – Forming teams that include at least one member with a portable radio from every agency for which communications is required.

### ***Backup Communications for Counties will be Amateur (Ham) Radio Operators (RACES, ARES, etc.).***

Name: Shelby County Amateur Radio Club (SCARC)  
POC: Tom Appleby  
Call Sign: W4TCA  
Phone No.: 205-601-4804 (cell)

Name: Shelby County Amateur Radio Club (SCARC)  
POC: Hub Harvey  
Call Sign: N4HUB  
Phone No.: 205-249-4818

## **Section 8: NIMS Communications Training**

### **Communications Unit Leader (COML)**

Personnel identified to be Communications Unit Leaders (COML) will be required to complete specific training courses in order to be considered qualified. These courses address the National Incident Management System, the Incident Command System, and the National Response Plan. Additional training will be required in this plan on the equipment used on the Regional Communications Vehicles and at Gateway Agencies. By combining the NIMS, ICS, and NRP training with technical training on relevant systems, the COML's will have the knowledge, skills, and abilities required to execute this plan in support of incident communications.

The Communications Unit Leader (COML) is the NIMS/ICS position with overall responsibility for incident communications. As with all ICS positions, the Unit Leader is expected to be capable of performing all tasks within the Communications Unit, including Radio Operator and Communications Technician. The USDHS Office of Grants and Training published Communications Unit Leader Core Competencies in March 2006, which outlines 26 tasks and 19 competencies for the COML. A number of these tasks are general ICS requirements, such as being responsible for subordinate staff, checking in upon arrival, obtaining a briefing from the supervisor, managing the unit, managing resources, and planning for demobilization. The remaining tasks are specific to the Communications Unit, such as receiving the Incident Action Plan, determining communications support requirements, serving as the technical expert on incident communications, designing the incident communications system, and installing, programming, and issuing equipment.

The COML's competencies include basic requirements, including support from his department, familiarity with NIMS/ICS, willing to be on call for incident response, and the ability to perform under pressure. The COML's communications specific requirements include a good working knowledge of communications systems, resources, plans, and facilities at the federal, state, regional, and local level. The COML must be familiar with the procedures for requesting resources and personnel through the local emergency management agency, to expedite the delivery of resources and assistance, and to document costs for possible reimbursement. The COML must be familiar with public safety communications frequency assignment, to select frequencies that minimize interference. The COML will also notify appropriate agencies of the frequencies in use at an incident, to minimize interference from other radio users. The COML must be able to rapidly obtain Station Temporary Authorizations from the FCC, and to work with his FCC-designated Public Safety Frequency Coordinators to identify new resources and minimize interference problems.

On the operational level, the COML must be familiar with operation of equipment on the regional communications vehicles, including the portable generator, ACU-1000, radio programming equipment, terrestrial and satellite telephone systems, repeater systems, and network equipment. The COML is responsible for establishing and managing the Incident Communications Center, if required to support the incident. The COML will be expected to complete ICS forms, including the ICS-205 (*Appendix G*), Incident Radio Communications

Plan. The COML will be responsible for briefing incident personnel on assigned frequencies and radio protocol.

**Note: This COML Training is being developed further by SAFECOM.**

**[www.safecomprogram.org](http://www.safecomprogram.org)**

<b>Required Training</b>	
ICS-100	Introduction to ICS
ICS-200	Basic ICS
ICS-700	National Incident Management System
ICS-800	National Response Plan
ICS-300	Intermediate ICS for Expanding Incidents

Training and certification of Communication Leaders is pending definition of certification requirements from the NIMS Integration Center. The Governance Committee will oversee the adherence to the Communication Unit Leader training and certification program as required by DHS for the region when training requirements become available. You must have a task book completed and signed off on by local, state and Department of Homeland Security to be a certified Communication Unit Leader.

## **SECTION 9: METHODS TO EXPAND RADIO COVERAGE/TACTICAL RADIO PLAN<sup>4</sup>**

### **Section 9.1 Systems Scenario**

Local agencies should have a separate radio frequency for Police, Fire, and other city services. Trunked radio systems accomplish this by using talk groups. Minimal radio coverage should be at more than 70% reliability inside and outside of buildings and cover the entire jurisdictional area. Trunked radio systems usually cover larger areas due to multiple agency membership. Trunked radio allows for the introduction of many fleets or groups of radio groupings for specialized communications.

Operability assumes that most tactical options exist in municipal and county radio systems. These include but are not limited to Mutual Aid channels for fire and police, appropriate calling and tactical channels in dispatch, mobiles and portables.

Every day events would be more efficiently handled in small departments if all services were in a common dispatch facility with a small console capable of cross patching and integrating telephone into the console. Local scene radio can be created by using talk-around- channels in repeater systems. Simplex radio will require an additional frequency. All communication systems have limits. Identify your communications deficiencies and correct them.

---

<sup>4</sup> Contributed by Dr. Joel Whitman, Chairman, Alabama Statewide Mutual Aid Taskforce and John Ellison, E-911 Director, Shelby County, Alabama.

Many smaller agencies may not meet these minimums for any number of reasons. The following are methods others have used to expand their radio coverage area.

1. Use telephone to contact neighboring assisting agencies.
2. Use cell phones for all employees to extend their ability to contact dispatch.
3. Use of frequency use agreements which allow your vehicles when out of your jurisdiction, to use neighboring radio systems. This works only if your equipment is in the same spectrum.
4. Use ACU-1000 tactical bridges to provide local interoperability. Range limited.
5. Extension of bridge range may be accomplished using mobile radios and low loss lead-in to antennas.
6. Install all local frequencies for interconnections.
7. Install all calling and tactical channels for your region and first responders.
8. Know FCC rules and regulations.
9. Remember all radio is talk back limited. Hearing portables and mobiles establish your systems range.

## **Section 9.2 Interoperability for Tactical Radio**

Tactical radio requires planning and the ability to execute communications necessary to utilize resources to effectively respond to a life threatening event. While each plan may be different, all will utilize these same elements.

Element 1;

Language: Plain English with simple concise language (Preference).

**LISTEN BEFORE TALKING!**

Element 2:

Predetermine who the local On Scene Commander (IC) will be for type of event.

Element 3:

Identify staging area and command post location. Use dispatch center or not is a local decision. It should be predetermined and at what point communications are moved out of initiating center.

Element 4:

Call up appropriate local resources using pre identified notification plan

Element 5:

Identify and notify all local responders of pre planned primary and other communications channels.

Element 6:

Determine what other resources are needed from outside local area. Notify pre-identified regional resources using agreed upon communication links. Notify EMA.

Element 7:

Establish staging area. Provide directions to work sites. Establish work radio channels, home channels, who talks to whom, and other communication channels to overcome interference.

Element 8:

Activate Communication Regional Communication Vehicle. Provide cross spectrum interoperability connections. Use dispatcher to act as buffer between local scene Incident Commander and ensure audio and data logging.

Element 9:

As local resources are used determine what additional resources are required and notify EMA.

Element 10:

Record all resources used, numbers of persons, equipment, location, time on sites, accident and injuries on appropriate ICS Forms.

## Appendix A: Included Agencies

### Shelby County Agencies

Shelby County Emergency Management Agency

Don Greene, Director

504 Highway 70, Columbiana, AL 35051

(205) 669-3999 (2050 288-9252 cell) Email: [dgreene@shelbyal.com](mailto:dgreene@shelbyal.com)

Shelby County Sheriff's Office

Sheriff Chris Curry

543 McDow Road, Columbiana, AL 35051

(205) 669-4181 Email: [ccurry@shelbyso.com](mailto:ccurry@shelbyso.com)

Shelby County 911

John Ellison, Executive Director

1004 County Services Drive, Pelham, AL 35124

(205) 439-6911 Email: [john@shelby911.org](mailto:john@shelby911.org)

Shelby County Highway Department

Randy Cole, County Engineer

506 Highway 70, Columbiana, AL 35051

(205) 669-3880 Email: [rcole@shelbyal.com](mailto:rcole@shelbyal.com)

Alabaster Police Department

Chief Stanley Oliver

201 1st Street North, Alabaster, AL 35007 (205) 663-7401 Email: [chief@alabasterpolice.org](mailto:chief@alabasterpolice.org)

Alabaster Fire Department

Chief Frank Matherson

890 1<sup>st</sup> Ave West, Alabaster, AL 35007 (205) 664-6818 Email:

[afrs911@aol.com](mailto:afrs911@aol.com)

Brierfield Volunteer Fire Department

Chief Spruce A. McRee

18567 Highway 139, Brierfield, AL 35035

(205) 665-3060 (205) 908-3850 cell Email: [spruce@crosscreektv.com](mailto:spruce@crosscreektv.com)

Cahaba Valley Fire District

Chief Jim Witherington

5487 Highway 280, Birmingham, AL 35242

(205) 991-5266 (Emergency 911) [jim.withergton@cahabavalley.org](mailto:jim.withergton@cahabavalley.org)

Calera Police Department  
Chief Sean Lemley  
10947 Highway 25, Calera, AL 35040 (205) 668-3503 [Email: slemley@calera.org](mailto:slemley@calera.org)

Calera Fire Department  
Chief Tommy Moon  
1310 17<sup>th</sup> Avenue, Calera, AL 35040  
(205) 668-3505 /3518 [Email: Chiefmoon@calera.org](mailto:Chiefmoon@calera.org)

Chelsea Fire Department  
Chief Wayne Shirley  
104 Chesser Drive, Chelsea, AL 35043  
(205) 678-6060 (Emergency 911) [Email: chiefshirley@bellsouth.net](mailto:chiefshirley@bellsouth.net)

Columbiana Police Department  
Chief Lamar Vick  
107 Mildred Street, Columbiana, AL 35051  
(205) 669-5800 [Email: lvick@columbianapolice.com](mailto:lvick@columbianapolice.com)

Columbiana Fire Department  
Chief Johnny Howard  
105 Hwy 47 South, Columbiana, AL 35051  
(205) 669-5800 Email:

County 17 Volunteer Fire Department  
Chief David Hawthorne  
73 Highway 73, Maylene, AL 35115  
(205) 663-1316 (Emergency 911) Email:

Dry Valley Volunteer Fire Department  
Chief Kevin Lucas  
45 County Road 19, Montevallo, AL 35115  
(205) 665-0752 (Emergency 911) Email:

Dunnavant Volunteer Fire Department  
Chief Ben Kirkland  
57095 Highway 25, Leeds, Alabama. 35094-6133  
(205) 699-3473 (Emergency 911) [Email: DUNNCHIEF@aol.com](mailto:DUNNCHIEF@aol.com)

East Shelby Rescue  
Chief David Smiley  
42030 Highway 25, Vincent, Alabama 35178  
(205) 672-2261 (Emergency 911) Email: [cvarebel@aol.com](mailto:cvarebel@aol.com)

Four Mile Volunteer Fire Department  
Chief Justin Glass



941 Highway 55, Wilsonville, AL 35186  
(205) 669-1729 (Emergency 911) Email: [jgskipper@aol.com](mailto:jgskipper@aol.com)

Greenpond Fire Department  
Chief Dwane Green  
19629 Eastern Valley Road, Greenpond, Alabama 35074  
(205) 938-9991 (Emergency 911) Email: [chief@greenpondfire.org](mailto:chief@greenpondfire.org)

Harpersville Police Department  
Chief David Latimer  
157 Highway 25, Harpersville, AL 35078  
(205) 672-2490 (Emergency 911) Email:

Harpersville Fire Department  
Chief Wade Holley  
38891 Highway 25, Harpersville, AL 35078  
(205) 672-7959 (Emergency 911) Email:

Helena Police Department  
Chief Doug Jones  
816 Highway 52, Helena, AL.35080  
(205) 663-6499 Email:

Helena Fire Department  
Chief John Wilder  
816 Highway 52, Helena, AL 35080  
(205) 663-5809 Email: [jwilder@cityofhelena.org](mailto:jwilder@cityofhelena.org)

Hoover Fire Department  
Chief Chuck Wingate  
240 Municipal Drive, Hoover, AL 35216  
(205) 444-7655 Email: [wingatej@ci.hoover.al.us](mailto:wingatej@ci.hoover.al.us)

Indian Ford Volunteer Fire Department  
Chief Jim McDougal  
4360 South Shades Crest Road, Bessemer, AL 35023  
(205) 426-2171 Email: [indianfordvfd@bellsouth.net](mailto:indianfordvfd@bellsouth.net)

Kingdom Volunteer Fire Department  
Chief Tony Miller  
3471 Highway 28- Columbiana, AL 35051  
(205) 669-0051 (Emergency 911) Email. [kingdomVFD@bellsouth.net](mailto:kingdomVFD@bellsouth.net)

Montevallo Police Department  
Chief Steve Holt  
545 Main Street, Montevallo, AL 35115



(205) 665-1264 Email:slimmpd@hotmail.com

Montevallo Fire Department  
Chief Bill Reid  
545 Main Street, Montevallo, AL 35115  
(205) 665-7600 (Emergency 911) Email:

North Shelby Fire District  
Chief Michael O'Connor  
4617 Valleydale Road - Birmingham, AL 35242-4608  
(205) 991-6570 (Emergency 911) [Email: chiefmoc@charter.net](mailto:chiefmoc@charter.net)

Pea Ridge Volunteer Fire Department  
Chief Alan Picklesimer  
840 Highway 54, Montevallo, AL 35115  
(205) 665-1973 (Emergency 911) Email: [alanpicklesimer@dishmail.net](mailto:alanpicklesimer@dishmail.net)

Pelham Police Department  
Chief Tommy Thomas  
3174 Church Street - Pelham, AL 35124  
(205) 620-6550 [Email: thomast@pelhamonline.com](mailto:thomast@pelhamonline.com)

Pelham Fire Department  
Chief Danny Ray  
3162 Pelham Parkway - Pelham, AL 35124  
(205) 620-6431 Email: [dray@pelhamonline.com](mailto:dray@pelhamonline.com)

Regional Paramedic Services  
Kyle McDonnel  
Post Office 2015, Alabaster, AL 35007  
(205) 664-2465

Rocky Ridge Fire District  
Chief Jon Lord  
2911 Metropolitan Way, Birmingham, AL 35242  
(205) 822-0532 Email: [rockyridgefire@bellsouth.net](mailto:rockyridgefire@bellsouth.net)

Saginaw Volunteer Fire Department  
Chief Jim Chambers  
566 Highway 26 East, Saginaw, AL 35137  
(205) 664-7711 (Emergency 911) Email:

Shelby Volunteer Fire Department  
Chief Cain Reed  
4895 Highway 47, Shelby, AL 35143  
(205) 669-0140 (Emergency 911) [Email:shelco54@bellsouth.net](mailto:shelco54@bellsouth.net)



Shelby Baptist Medical Center  
Administrator Scott Williams  
1000 1st Street North - Alabaster, AL 35007  
(205) 620-8100

South East Shelby Rescue  
Chief Mark Bray  
105 Highway 47 South - Columbiana, AL 35051  
(205) 669-4866 (Emergency 911) [Email: ssc601@bellsouth.net](mailto:ssc601@bellsouth.net)

Summer Hill Volunteer Fire Department  
Chief Jeff Jones  
17947 Highway 25, Columbiana, AL 35051  
(205) 669-6488 Email: [jkrkjones@aol.com](mailto:jkrkjones@aol.com)

Vandiver Volunteer Fire Department  
Chief Dennis Brasher  
12177 Highway 43, Vandiver, AL 35176  
(205) 672-2366 Email: [vfd120@aol.com](mailto:vfd120@aol.com)

Vincent Volunteer Fire Department  
Chief Mike Smiley  
42030 Highway 25, Vincent, AL 35178  
(205) 672-8070 Email: [jsmbob9@aol.com](mailto:jsmbob9@aol.com)

Westover Volunteer Fire Department  
Chief Tim Honeycutt  
Post Office Box 356, Westover, AL 35185  
(205) 678-4523 Email: [thoneycutt@westoveralabama.org](mailto:thoneycutt@westoveralabama.org)

West Shelby Volunteer Fire Department  
Chief Lynn Hood  
Post Office Box 352, Montevallo, AL 35115  
(205) 665-9733 Email: [lhood81@charter.net](mailto:lhood81@charter.net)

Wilsonville Volunteer Fire Department  
Chief Davy Edwards  
Post Office Box 70, Wilsonville, AL 35186  
(205) 669-6180 Email: [echief160@aol.com](mailto:echief160@aol.com)

**(Include ALL county, city, volunteer, and private agencies providing law enforcement, firefighting, and EMS service in your county)**



## Appendix B: Regional Interoperable Communications Vehicles

Region	Agency	City	Contact	Contact Phone
Region 1	Mobile Co EMA	Mobile	Walt Dickerson	251 460-8000
Region 2	Houston Co EMA	Dothan	Shelby Womack	334 794-9720
<b>Region 3</b> ***	<b>Tuscaloosa Co EMA</b>	<b>Tuscaloosa</b>	<b>David Hartin</b>	<b>205 349-0150</b>
Region 4	Chambers Co EMA	Lanett	Donnie Smith	334 576-0911
Region 5	Lauderdale Co EMA	Florence	George Grabryan	256 760-6363
Region 6	Madison Co EMA	Huntsville	Rusty Russell	256 427-5130
Region 7	Calhoun Co EMA	Jacksonville	Dan Long	256 435-0540
Statewide	AEMA	Clanton	Fred Springall	205 280-2288

\*\*\*Shelby County is in Region 3 for Communications Vehicles



## Appendix C: Radio Protocol

### Interoperable communications radio protocol

- State Approved Ten Codes (listed below) are not permitted on shared channels; **the use of Plain Language is a preferred in all situations.**
- Combine agency name and unit number to create call sign. (Example: Jacksonville Fire Engine 1, Pell City Police 201.)
- Incident Command is named for the location of the incident. (Example: Racetrack Command)
- State your call sign followed by the call sign of the person you are calling. (Example: Pell City Police 201 to Racetrack Command). This provides information to receiving agency that a call has been placed, even though your call sign may be dropped by premature key (PTT) action.
- Use prowords and phonetics as appropriate to make your message easier to understand.

Common Prowords				
Copied	Affirmative	Negative	Stand-by	Go ahead
Say Again	Correction	Break	Cancel	Disregard
In Service	Out of Service	En Route	On Scene	Out

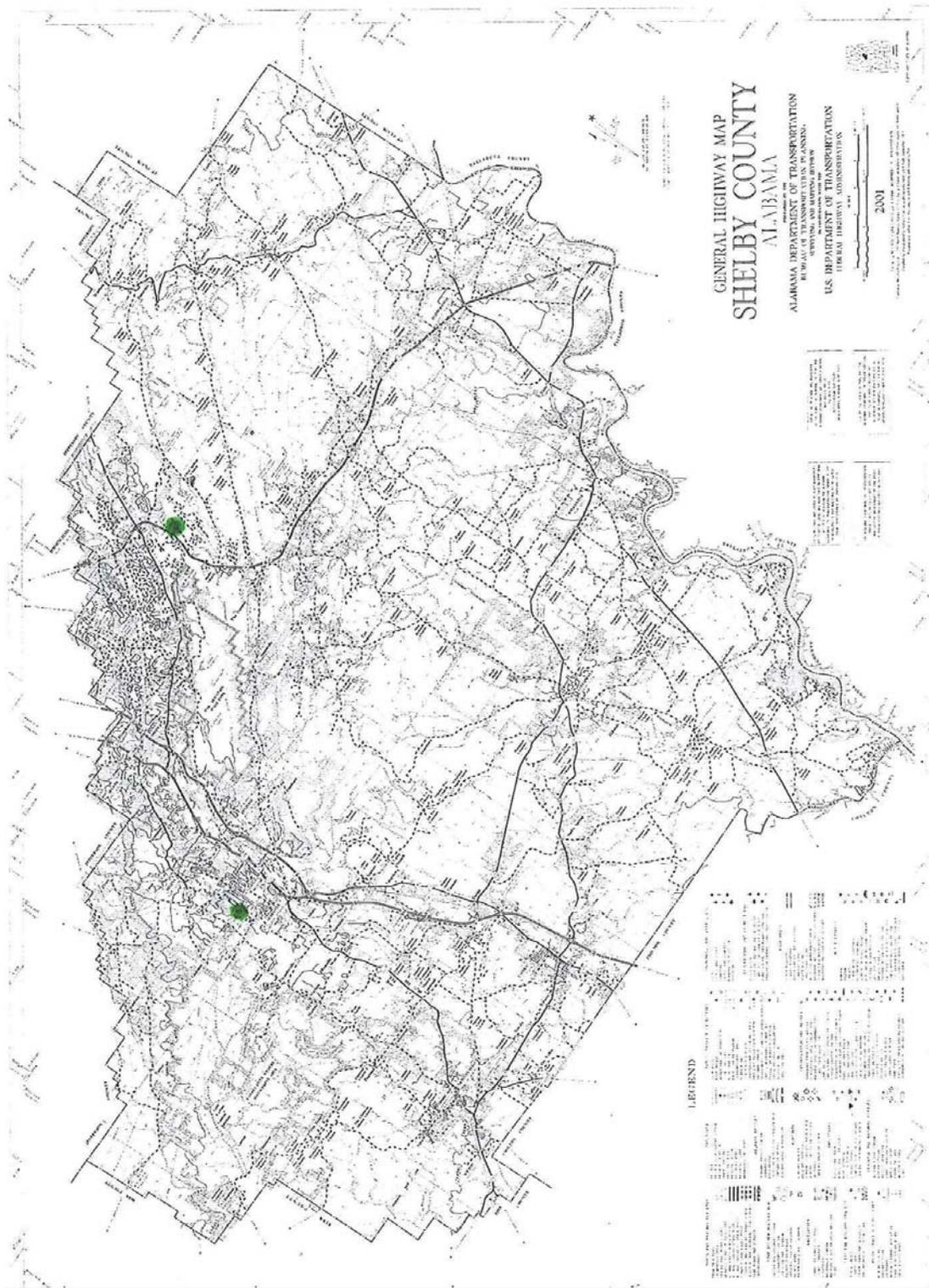
Standard Phonetic Alphabet				
Alpha	Bravo	Charlie	Delta	Echo
Foxtrot	Golf	Hotel	India	Juliet
Kilo	Lima	Mike	November	Oscar
Papa	Quebec	Romeo	Sierra	Tango
Uniform	Victor	Whiskey	X-Ray	Yankee
Zulu				

## Appendix D: Shelby County Frequencies

Interoperability Channel Naming Guide for the Shelby County Alabama														
NPSTC Name	Short Name	Rx		Tx		Channeling		NPSTC Name	Short Name	Rx		Tx	Channeling	
	(6 char)	FREQ	Rx CTCSS	FREQ	Tx CTCSS				(6 char)	FREQ	Rx CTCSS	FREQ		Tx CTCSS
<b>PRIMARY FIRE VHF HIGH BAND TACTICAL CHANNELS</b>							<b>UHF</b>							
VCALL10	VCAL10	155.7525	156.7	155.7525	156.7	N		UCALL40	UCAL40	453.2125	none*	458.2125	156.7	N
VFIRE 21	VFIRE21	154.280	156.7	154.280	156.7	N		UCALL40D	CAL40D	453.2125	none*	Simplex	156.7	N
VFIRE 22	VFIRE22	154.265	156.7	154.265	156.7	N		UTAC41	UTAC41	453.4625	none*	458.4625	156.7	N
VFIRE 23	VFIRE23	154.295	156.7	154.295	156.7	N		UTAC41D	TAC41D	453.4625	none*	Simplex	156.7	N
<b>PRIMARY LAW ENFORCEMENT VHF HIGH BAND TACTICAL CHANNELS</b>							<b>800 MHz</b>							
VCALL 10	VCALL 10	155.7525	156.7	155.7525	156.7	N		UTAC42	UTAC42	453.7125	none*	458.7125	156.7	N
StateNet LE	MALE	155.010	none	155.010	none	W		UTAC42D	TAC42D	453.7125	none*	Simplex	156.7	N
VLAW 31	VLAW 31	155.475	156.7	155.475	156.7	N		UTAC43	UTAC43	453.8625	none*	458.8625	156.7	N
VLAW 32	VLAW 32	155.4825	156.7	155.4825	156.7	N		UTAC43D	TAC43D	453.8625	none*	Simplex	156.7	N
<b>VHF HIGH BAND</b>							<b>VHF LOW BAND</b>							
VCALL10	VCAL10	155.7525	156.7	Simplex	156.7	N		8CALL90	CAL90	851.0125	156.7	806.0125	156.7	W
VTAC11	VTAC11	151.1375	156.7	Simplex	156.7	N		8CALL90D	CAL90D	851.0125	156.7	Simplex	156.7	W
VTAC12	VTAC12	154.4525	156.7	Simplex	156.7	N		8TAC91	TAC91	851.5125	156.7	806.5125	156.7	W
VTAC13	VTAC13	158.7375	156.7	Simplex	156.7	N		8TAC91D	TAC91D	851.5125	156.7	Simplex	156.7	W
VTAC14	VTAC14	159.4725	156.7	Simplex	156.7	N		8TAC92	TAC92	852.0125	156.7	807.0125	156.7	W
VFIRE21*	VFIR21	154.280	156.7	Simplex	156.7	N		8TAC92D	TAC92D	852.0125	156.7	Simplex	156.7	W
VFIRE22*	VFIR22	154.265	156.7	Simplex	156.7	N		8TAC93	TAC93	852.5125	156.7	807.5125	156.7	W
VFIRE23*	VFIR23	154.295	156.7	Simplex	156.7	N		8TAC93D	TAC93D	852.5125	156.7	Simplex	156.7	W
VFIRE24	VFIR24	154.2725	156.7	Simplex	156.7	N		8TAC94	TAC94	853.0125	156.7	808.0125	156.7	W
VFIRE25	VFIR25	154.2875	156.7	Simplex	156.7	N		8TAC94D	TAC94D	853.0125	156.7	Simplex	156.7	W
VFIRE26	VFIR26	154.3025	156.7	Simplex	156.7	N		<b>VHF LOW BAND</b>						
VMED28	VMED28	155.3400	156.7	Simplex	156.7	N		LLAW1	LLAW1	39.46	156.7	45.86	156.7	W
VMED29	VMED29	155.3475	156.7	Simplex	156.7	N		LLAW1D	LLAW1D	39.46	156.7	Simplex	156.7	W
VLAW31	VLAW31	155.4750	156.7	Simplex	156.7	W		LFIRE2 (pend)	LFIRE2	39.48	156.7	Simplex	156.7	W
VLAW32	VLAW32	155.4825	156.7	Simplex	156.7	N		LLAW3D	LLAW3D	45.86	156.7	Simplex	156.7	W
StateNet LE	MALE	155.0100	156.7	Simplex	156.7	W		LFIRE4	LFIRE4	45.88	156.7	Simplex	156.7	W
Fire Mutual*	MAFIRE	155.0400	156.7	Simplex	156.7	W								
<b>SHELBY COUNTY HOMELAND SECURITY CHANNELS</b>														
HLS NORTH	HLS NOR	155.5425	156.7	153.8825	156.7	N								
HLS MOBILE	HLS MOB	156.1875	156.7	158.9325	156.7	N								
HLS WEST	HLS WEST	158.7675	156.7	156.0675	156.7	N								
<p>(*) NOTE: At a future date to be determined during the ANSI standardization process, it is recommended that all nationwide interoperability channels have 156.7 Hz CTCSS on both receive and transmit frequencies. During the transition period, it is recommended that channels marked with an asterisk and already narrowbanded (VCALL/TAC and UCALL/TAC channels) should be programmed for CTCSS on subscriber transmit only, with carrier squelch on receive. August 2008</p> <p>NOTE: Tx CTCSS for paired UHF and 800 MHz channels may vary to permit transmitter steering for multi-site systems. However, use of multi-CTCSS base receivers is recommended so that systems always respond to 156.7 Hz as a national emergency tone. For 800 MHz channels, CTCSS plans and operational procedures often are addressed in 800 MHz Regional Plans.</p>														
													2-Nov-09	



## Appendix E: Homeland Security Repeater Site Map



## **Appendix F: JPS ACU-1000 Operations (Communications Bridge)**

### **Locations in Shelby County:**

Shelby County Sheriff's Office	Fixed Unit	POC: Ken Burchfield
Pelham Fire Department	Mobile Unit	POC: Chris Ward
City of Pelham	Fixed Unit	POC: Chris Ward

### **JPS ACU-1000 Fixed System (All Communications Centers)**

#### **Basics:**

The ACU-1000 unit is designed to interconnect dissimilar radio systems by distributing the audio or voice-band signals from selected radios or telephone connections to other specified radios or telephones connected via the Gateway Switch. By connecting directly to each radio's control circuitry, the unit can detect when a radio on the switch is receiving audio (to be distributed to other radios) and assert the "push-to-talk" (PTT) on those radios to which the audio is to be transmitted.

The ACU-1000 contains multiple slots that radios can be quickly attached and programmed to the (transmit and receive) frequencies of involved agencies. These radios can then be cross-connected by the built-in Gateway Switch in a variety of ways, including a mixture of 2-way and conference conversations as well as a mix of permanent and temporary connections to include radios, telephone's, and cellular phones. The system can provide crossband operations between agencies as diverse as FEMA, Red Cross, the National Guard, local emergency management, law enforcement, fire departments, and emergency medical services, as well as other public service agencies that might be involved. -



## **Appendix G: Regional Communications Vehicle Overview** **(Region 7 Vehicle shown in pictures)**

### **About the Alabama Regional Incident Support Unit (ARISU)**

The ARISU was designed and built to give Local First Responder and Emergency Managers unprecedented connectivity and interoperability from remote and on site emergency and disaster scenes.

Built on a multi-layered communications platform, the ARISU provides the necessary communications capability to allow for the efficient execution of vital Incident Command and Emergency Planning activities from any location independent of local infrastructure.



### **Radio Interoperability**

The ARISU includes an ACU-1000 per Appendix E of this document. The ARISU can rapidly establish on-site connectivity between different radio systems and provide radio-to-telephone connectivity. This ability to cross-band disparate radio nets allows the on-site incident commander the ability to establish and control an on-scene ad hoc Mutual Aid Net or Channel. These cross-banded radio nets can further be separated into distinct call groups. The integral ARISU interoperability package also can serve as a radio relay serving to extend the existing tower-based radio system. The system can also provide in-building or in-tunnel radio extension services. Radios that can be cross-linked include VHF, UHF, 800 MHz, trunked, military and - phones.



### **High Speed Internet Access**

The ARISU provides the on-site Incident Command Team with high speed internet access via a mobile satellite link. This satellite is easily deployed and uses GPS to find and lock onto the satellite for rapidly established internet and data access. Integrated with a wireless network, the on-site local emergency team has access to the internet via a mobile Hot Spot. This will allow untethered access to email, instant messenger and web based intranets or Critical Incident Management Applications. With access to high speed data, incident reporting and support coordination with offsite agencies can be more easily accomplished leaving radio bandwidth for critical command actions.



### **Telephone Service**

The ARISU comes equipped with a cellular telephone base station and power boost amplifier that allows standard telephones to access existing cell phone networks from extended ranges. This package can provide access for multiple phone lines and provides standard voice, dial-up data and fax services.

### **Integrated Work Shelter**

Mountable on any standard 8 ft pickup truck, the system can be dismantled from the truck using an enhanced jack system within minutes. This dismantling option allows for full shelter mission functionality and frees the truck for other administrative or logistics functions during extended operations. The ARISU shelter provides an environmentally controlled workspace with a command desk console for 2-3 operators, slide-out equipment racks that house the communications and interoperability gear and a storage closet and convenience rack.

### **System Components**

- AuraGen 5Kw electrical power generator and custom power distribution
- Touch screen control of audio/video systems
- JPS ACU 1000 Communications Bridge
- Motorola VHF, UHF repeaters and radios
- Ground Control satellite internet service with DirecTV®
- Cell phone dock

Satellite phone  
Pelco Video camera  
Axis 4-Port video server  
Custom shelter  
Custom roof rack  
Full audio/video presentation and recording systems  
3 wireless enabled high-speed laptop computers

**References:**

- National Interoperability Field Operating Guide website:  
[http://www.npstc.org/documents/NIFOG\\_1\\_3.pdf](http://www.npstc.org/documents/NIFOG_1_3.pdf)
- Communications Unit Leader Plan
- Programming:

Hub Harvey	205-249-4818
Skip Leslie	205-664-6817
Andrew Bryant	205-663-7401
Chris Ward	205-620-6434
Chris Fulmer	205-601-3762

**Appendix H: ICS Form 205 OS**

<b>INCIDENT RADIO COMMUNICATIONS PLAN</b>		1. Incident Name		2. Date/Time Prepared		3. Operational Period Date/Time	
4. Basic Radio Channel Utilization							
Radio Type/Cache	Channel	Function	Frequency/Tone	Assignment	Remarks		
--							
--							
--							
--							
--							
--							
5. Prepared by (Communications Unit)							

<p><b>Alabama Statewide Communications Interoperability MOU</b>          Memorandum of Understanding – Providing necessary permissions to conduct two-way radio communications interoperability</p>	
<b>Name of Agency</b>	<b>FCC License Call Letters</b>
<b>Location</b>	
<p><b>Contact Person</b> with Agency signing authority to grant permission to use a mobile radio on the existing radio system and to grant permission to conduct two-way radio interoperability communications.</p>	
<p><b>Radio System Information</b>          Describe type of radio system</p> <p><input type="checkbox"/> Simplex</p> <p><input type="checkbox"/> Duplex (repeater)</p> <p><input type="checkbox"/> Trunked System (specify below)</p> <p><input type="checkbox"/> Analog Trunked</p> <p><input type="checkbox"/> Digital Trunked</p>	<p><b>Advise any information that would be helpful in describing the radio system.</b>          Example: type or manufacturer, current cross-connect capabilities, etc.</p>
<p>Radio Programming Information This is the frequency and tone code information needed to set up a mobile radio to function as part of the radio system. This will be the frequency that will be used for the actual cross-connect activities.</p>	
<p><b>Mobile Radio Transmit Frequency</b>          MHz</p>	<p><b>Mobile Radio Receive Frequency</b>          MHz</p>
<p><b>System Access Information (Squelch Code Information)</b>          Advise the type of squelch access for the radio system, Subaudible (CTCSS), Digital or Carrier squelch.          Tone      Hz    or    Digital Code                      Carrier Squelch    Other information</p>	
<p><b>Name used to identify this channel/frequency/talk group. Example: TAC 1, F 1, etc.</b></p>	
<p><b>Main Dispatch Frequency</b> to allow monitoring and enable coordination of the cross-connect operation          Mobile Transmit Frequency      MHz    Mobile Receive Frequency      MHz          Tone                      Hz    or    Digital Code                      Name used to identify this frequency</p>	
<p><b>Permission is granted to operate a mobile radio on the listed frequencies utilizing the existing FCC License call letters and to provide interoperability communications with this Agency as directed by the Incident Commander or designee.</b>  <b>Signature</b> _____  <b>Date</b> _____</p>	
<p>This permission is subject to restrictions as stated by the signing authority</p>	



## **Glossary**

### **Acronyms**

**COG** Council of Governments  
**EIA** Electronics Industry Association  
**EMS** Emergency Medical Services  
**FCC** Federal Communications Commission  
**GHz** Gigahertz  
**MHz** Megahertz  
**KHz** Kilohertz  
**MOU** Memorandum of Understanding  
**NCIC** National Crime Information Center  
**NPSPAC** National Public Safety Planning Advisory Committee  
**PDA** Personal Digital Assistant  
**PSWN** Public Safety Wireless Network  
**RF** Radio Frequency  
**TIA** Telecommunications Industry Association  
**UHF** Ultra High Frequency Band  
**VHF** Very High Frequency

**Agency:** An agency, for the purposes of this document, is a group of radio users organized by political subdivision or response organization.

### **Antennas**

Any structure or device used to collect or radiate electromagnetic waves.

### **Band**

In communications, the spectrum between two defined limited frequencies. For example, the Ultra High Frequency (UHF) is located from 300 MHz to 3,000 MHz in the radio frequency spectrum.

### **Channel**

A single unidirectional or bidirectional path for transmitting or receiving, or both, of electrical or electromagnetic signals.

### **Communications system**

A collection of individual communications networks, transmission systems, relay stations, tributary stations, and data terminal equipment usually capable of interconnection and interoperation to form an integrated whole. Note: The components of a communications system serve a common purpose, are technically compatible, use common procedures, respond to controls, and operate in unison.

**Communications Unit Leader (COML):** An incident command communications leader critical for task/skill-related competencies required by the ICS/NIMS Systems.

### **Coverage**

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

### **Data**

Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means. Any

representations such as characters or analog quantities to which meaning is or might be assigned.

### **Dead Spots (or Zones)**

The area, zone, or volume of space that is within the expected range of a radio signal, but in which the signal is not detectable and therefore cannot be received. Common causes of dead spots include depressions in the terrain and physical structures.

### **Digital Signal**

A signal in which discrete steps are used to represent information.

### **Frequency**

For a periodic function, the number of cycles or events per unit time.

### **Frequency bands**

Frequency bands where land mobile radio systems operate in the United States including the following:

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.

**Gateway Agency:** A public safety agency that has acquired a fixed or mobile gateway device and agrees to abide by the policies established by the Public Safety Communications Board.

**Gateway Manager (COML):** The Gateway Manager shall be the responsible party within a public safety or public service entity trained for use, operation and deployment of a Gateway (fixed or mobile). The Gateway Manager may deploy one or more subordinate technicians who will act under their supervision and control.

**Gateway System:** Any communication network set up that involves the utilization of one or more Gateway devices (e.g., ACU-1000).

**Incident Command System (ICS):** The coordinated effort of managing emergency responders that requires functionality outside the scope of the normal job routine.

Incident Command is the first requirement to utilizing any interoperability function within the regional communications system. The Incident Command Structure commences on the field responder level and involves field supervision authority called the Incident Commander. See also *National Incident Management System*.

**Incident Commander (IC):** The Incident Commander provides the field supervision authority during an incident as outlined in the *National Incident Management System*.

### **Infrastructure**

When relating to radio communications systems, the hardware and software needed to complete and maintain the system.

**Interconnect:** An interconnect is created by connecting two or more radio channels or voice paths with a gateway device, VoIP interconnection or console link.

### **Interference**

In general, extraneous energy, from natural or man-made sources, that impedes the reception of desired signals.

### **Interoperability**

The ability of public safety agencies to be able to talk to one another—to exchange voice and/or data with one another on demand and in real time.

**Interoperability Resources:** The devices and systems in use in the region to enable communications interoperability.

**Interstate compact agreement**

A written contract between states to cooperate on a policy issue or program that extends across and through state boundaries.

**Joint Powers Act**

A written contractual agreement entered into between two or more public agencies subject to any constitutional or legislative restriction imposed upon any of the contracting public agencies.

**Kilohertz (KHz)**

A unit of frequency denoting one thousand (10<sup>3</sup>) Hz.

**Megahertz (MHz)**

A unit of frequency denoting one million (10<sup>6</sup>) Hz.

**Memorandum of Understanding (MOU)**

An agreement of cooperation between organizations defining the roles and responsibilities of each organization in relation to the other or others with respect to an issue over which the organizations have concurrent jurisdiction.

**National Incident Management System (NIMS):** Guidelines developed by the first responder community and endorsed by national first responder associations and the Department of Homeland Security to establish a consistent nationwide approach to a core set of concepts, principles and standard terminology for incident management. The core concepts include: the Incident Command System (ICS); multi-agency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

**Pager**

A communications device in which the intended receiver is alerted to receive a message or return a call.

**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.

**Proprietary Software**

Signaling protocol or software that is unique to a manufacturer and incompatible with other manufactured systems.

**Protocol**

A set of unique rules specifying a sequence of actions necessary to perform a communications function.

**Public Officials**

Public officials represent or work for government entities often in executive roles. Public officials include elected and appointed officials at every level of government working to serve the public in a variety of roles, such as council members, police chiefs, fire chiefs, sheriffs, governors, chief information officers, mayors, and chief communications officers.

**Public Safety Answering Point (PSAP):** A facility equipped and staffed to field emergency calls, such as 911.

**Public Safety Communications Board:** Group established to set public safety policies and to oversee their implementation/execution.

**Public Safety Support Providers**

Includes those whose primary mission might not fall within the classic public safety definition, but whose mission may provide vital support to the general public and/or the public safety official. Law enforcement, fire, and EMS would fit the first category, while transportation or public utility workers would fit the second.

**Radio Cache**

A portable or permanent storage facility for radios.

**Radio Channel**

An assigned band of frequencies sufficient for radio communication.

Note 1: The bandwidth of a radio channel depends upon the type of transmission and the frequency tolerance. Note 2: A channel is usually assigned for a specified radio service to be provided by a specified transmitter.

**Radio Communication**

Telecommunication by means of radio waves .signal

The detectable transmitted energy which carries information from a transmitter to a receiver.

**Radio Equipment**

As defined in Federal Information Management Regulations, any equipment or interconnected system or subsystem of equipment (both transmission and reception) that is used to communicate over a distance by modulating and radiating electromagnetic waves in space without artificial guide. This does not include such items as microwave, satellite, or cellular telephone equipment.

**Radio Frequency (RF)**

Any frequency within the electromagnetic spectrum normally associated with radio wave propagation.

**Regional Incident Management:** Routine coordination of responses across a region to natural and technological disasters and attacks.

**Regional Interoperability Committee (R7IT):** The committee established in the region to oversee regional communication issues.

**Regional Interoperability Coordinator (COML):** Executes the day-to-day oversight and coordination of regional interoperable communications resources.

**Spectrum**

The usable radio frequencies in the electromagnetic distribution.

Specific frequencies have been allocated to the public safety community.

They include:

- 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

**System**

Any organized assembly of resources and procedures united and regulated by interaction of interdependence to accomplish a set of specific functions.

**Trunked Radio System**

A system that integrates multiple channel pairs into a single system.



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 for a given channel loading.

**Unit:** A unit is the individual radio subscriber belonging to an agency and maintaining a specific radio identity.

