State of Iowa

Tactical Interoperable Communications Plan (TICP)

ISICSB

Iowa Statewide Interoperable Communications System Board

Version 1.2
November 2023

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Signatures of Concurrence

By:

NAME	AGENCY	DATE
Michele BischOf	City of Des Moines (Fire Department)	11-9-2023
Mind Benson (DocuSigned by: Mindy Benson BBFDEB99C65C46B...)	Black Hawk County Emergency Management (EM)	11/14/2023
RhOnda Braudis (DocuSigned by: Rhonda Braudis D425F952CD7F45A...)	Marshall County Communications Commission (Member-at-Large)	11/14/2023
Daniel Brown	Department of Transportation (Iowa DOT)	11-9-2023
Blake DeRouchey	Department of Homeland Security & Emergency Mgmt. (HSEMD)	11-9-2023
Brid et Edson (DocuSigned by: Bridget Edson B122B280F9924D0...)	Chickasaw County Rescue (EMS)	11/19/2023
Dan Fank (DocuSigned by: Dan Fank 7C5B6039ED8B4E2...)	Worth County Sheriff's Office {Sheriffs Office)	11/14/2023
Cindy Heick	Department of Public Health {Iowa DPH)	11-9-2023
Wendi Hess (DocuSigned by: Wendi Hess A37B9714378E4C8...)	Woodbury Communications Center (Communications Center)	
Heath Hove	Department of Public Safety (Iowa DPS)	11-9-2023
Dav,d Ness	Des Moines Police Department (Municipal Police Department)	11-9-2023
Daniel Schaffer (DocuSigned by: Daniel Schaffer 1CE03CC07A1F477...)	Lake City Police Department (Municipal Police Department)	11/14/2023

NAME	AGENCY	DATE
Travis Solem	Warren County 911 (Communications Center)	11-9-2023

NAME	AGENCY	DATE
Michael Strauser (DocuSigned by: Michael Strauser 8246DA61053048D...)	Department of Natural Resources (Iowa DNR)	
Jessica Turba (DocuSigned by: Jessica Turba D705C675D87546B...)	Office of the Chief Information Officer (Office of the CIO)	11/20/2023
Patnck Updi	Department of Corrections (Iowa DOC)	11-9-2023
Jeffre Vandewater (DocuSigned by: JEFF VANDEWATER E6305AD90E9F42B...)	Adair County Sheriffs Office (Sheriffs Office)	11/14/2023
Anna Voss (DocuSigned by: Anna Voss 8DA1C9EC33C247E...)	Iowa Law Enforcement Academy (ILEA)	11/17/2023
Curtis Woten	Blakesburg Volunteer Fire & Rescue !Fire Department - Volu,neerJ	11-9-2023

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Record of Change

Change No.	Description	Change Date	Approved By
1	Harrison Co PSAP phone number changed pg A-2 per Phillip Davis, change made in FOG also/ version to 1.1	11/20/2023	H. Nichols SWIC
2	Carroll Co PSAP phone number changed page A-1 per Jason Hoffman, change made in FOG also	11/22/2024	H. Nichols SWIC
3	Added DPS Cedar Falls on page A-1 per Jacob Reineke this was already in the FOG/	11/22/2024	H. Nichols SWIC
4	Board membership numbers changed to 7 and Fig 2.2 on page 3 updated to more accurately reflect the Governance of ISICS and match the current SCIP	11/22/2024	H. Nichols SWIC
5	Chapt 2.3, page 4, deleted state agencies including Iowa Department of Public Safety, Transportation, Homeland Security and Emergency Management, Corrections, Natural Resources, Public Health and Law Enforcement Academy from membership and changed membership from 2 to 1 for listed disciplines per SF 2385 May 17, 2024.	11/22/2024	H. Nichols SWIC
6	Chapt 3.1 page 7, updated hyperlink for resources page to fix broken link. / version to 1.2	11/22/2024	H. Nichols SWIC

This Tactical Interoperable Communications Plan (TICP) is subject to information and/or equipment updates and changes. Use this Record of Change to document and manage TICP modifications throughout the life of this document. All attempts have been made to ensure the accuracy of the information within this TICP as of each documented distribution date. The most current version of the Iowa TICP will be available by contacting the Iowa Statewide Interoperability Coordinator, Haley Nichols, at nichols@dps.state.ia.us

Executive Overview

This document establishes a Tactical Interoperable Communications Plan (TICP) for the State of Iowa. The TICP is intended to describe the Iowa interoperable communications landscape, document the available interoperable communications resources by each agency within the state, and define the rules of use or operational procedures for the activation and deactivation of each resource.

The Iowa TICP provides tactical guidance to emergency responders at the regional level as interoperable communications needs progress from a local response to a state "Type 3" incident or greater. The procedures set forth in this plan utilize and build upon the interoperability standards adopted by the Iowa Statewide Interoperable Communications System Board (ISICSB) and the existing standard operating procedures within participating agencies.

Interoperability is the ability to communicate as needed, on demand, and as authorized at all levels of government across all disciplines. Interoperable resources incorporated into this TICP are:

- Shared Systems refers to a single radio system used to provide service to several public safety or public service agencies.
- Intra-system shared channels refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using the same radio system.
- Inter-system shared channels refer to common frequencies/talkgroups established and programmed into radios to provide interoperable communications among agencies using different radio systems (e.g., mutual-aid channels, interoperability channels, etc.).
- Gateway Systems interconnect disparate systems allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency (whether on different frequency bands or radio operating modes). Dispatch consoles can function as gateways by creating patches between channels programmed into that console. Gateway devices can be fixed with a specific location and/or mobile.
- Mobile Repeaters refers to deployable devices combining a radio receiver and a radio transmitter that receives a weak or low-level signal and retransmits it at a higher level so that the signal can cover longer distances with minimal degradation.
- Cache Radios refers to a collection of standby radios from a state, regional, and/or individual agencies that can be deployed to support regional incidents. These caches provide responders access to common and compatible surge radios resources when needed to use during an incident.
- Data Communications refers to the deployable computer local area networks, devices, and applications that support real time data exchange between public safety entities involved in a coordinated incident response or mutual aid effort.
- Mobile Communications Units (MCUs) refers to any vehicular radio resource that can be deployed to provide or supplement communications capabilities in an incident area. Examples of the types of communications devices an MCU can house include subscriber and base station radios of various frequency bands, gateway devices, satellite phones, wireless computer networks, and video broadcasting/receiving equipment. These communications devices may be permanently located or stored in the MCUs when not in use and available for deployment.

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Chapter 1 State of Iowa Information

Ch. 1.1 Participating Jurisdictions/Agencies/Disciplines

The Iowa Tactical Interoperable Communications Plan (TICP) is intended for use by first responders and may be used by governmental or non-governmental organizations and personnel requiring communications or coordination during an incident or planned event.

Important contact information can be found in Appendix R.

Ch. 1.2 Iowa Homeland Security Regions

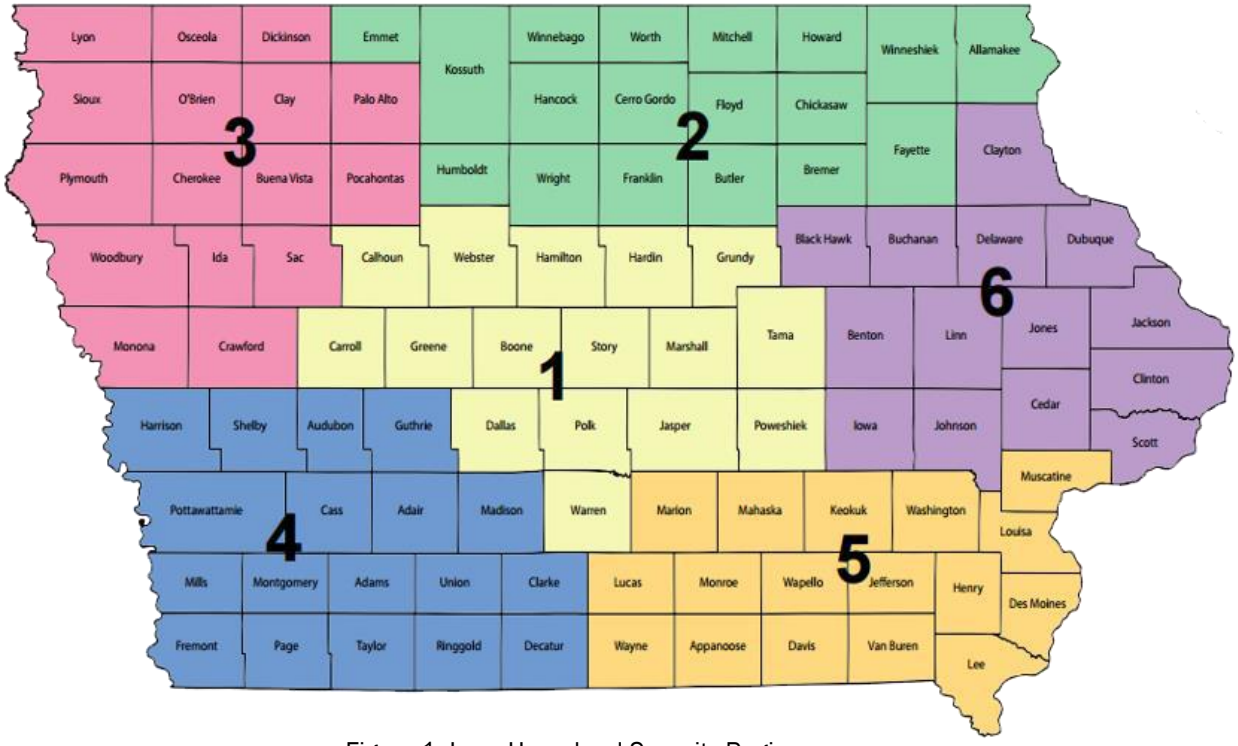


Figure 1: Iowa Homeland Security Regions

Legend	
Region 1	Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster
Region 2	Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright
Region 3	Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury
Region 4	Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union
Region 5	Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne,
Region 6	Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jones, Jackson, Johnson, Linn, Scott

Ch. 1.3 TICP Point of Contact

The primary and alternate POC for questions, or to request copies of this TICP are:

Primary:

POC Name:	Haley Nichols
Title:	Statewide Interoperability Coordinator
Agency Name:	Interoperability Communications Bureau Iowa Department of Public Safety
Address:	215 E. 7th Avenue Des Moines
Phone:	515-725-6091
E-Mail:	nichols@dps.state.ia.us

Alternate:

POC Name:	Curtis Walser
Title:	Administrative District Chief; Deputy SWIC
Agency Name:	Cedar Rapids Fire Department
Address:	713 1st Avenue SE Cedar Rapids
Phone:	319-286-5194
E-Mail:	c.walser@cedar-rapids.org

Chapter 2 Governance

Ch. 2.1 Governing Body

This TICP was developed under the authority of the Iowa Statewide Interoperable Communications System Board (ISICSB). The ISICSB provides governance and coordination toward the development and implementation of this TICP. Appendix R provides contact information for members of the governing body and its subcommittees. The ISICSB is comprised of 7 voting members.

The Board and its subcommittees are organized as depicted in the below chart:

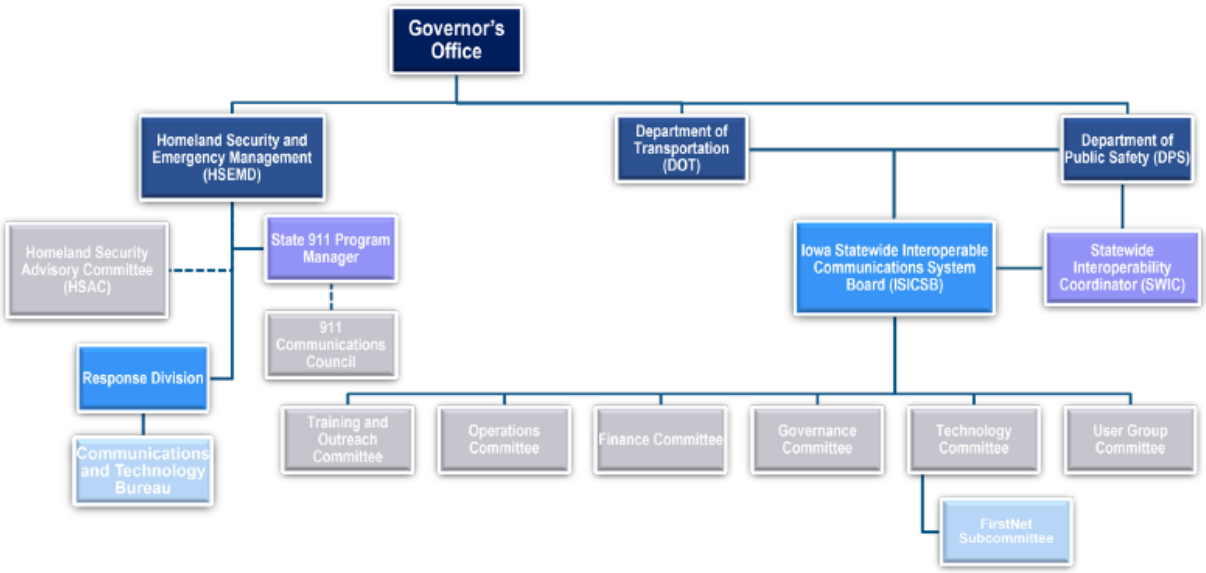


Figure 2: ISICSB Organization Chart

Ch. 2.2 Responsibilities of the ISICSB

The ISICSB duties as specified in Iowa Code Section 80.29 include:

1. Implement and maintain organizational and operational elements of the board, including staffing and program activity.
2. Review and monitor communications interoperability performance and service levels on behalf of agencies.
3. Establish, monitor, and maintain appropriate policies and protocols to ensure that interoperable communications systems function properly.

4. Allocate and oversee state appropriations or other funding received for interoperable communications.
5. Identify sources for ongoing, sustainable, longer-term funding for communications interoperability projects, including available and future assets that will leverage resources and provide incentives for communications interoperability participation, and develop and obtain adequate funding in accordance with a communications interoperability sustainability plan.
6. Develop and evaluate potential legislative solutions to address the funding and resource challenges of implementing statewide communications interoperability initiatives.
7. Develop a statewide integrated public safety communications interoperability system that allows for shared communications systems and costs, takes into account infrastructure needs and requirements, improves reliability, and addresses liability concerns of the shared network.
8. Investigate data and video interoperability systems.
9. Expand, maintain, and fund consistent, periodic training programs for current communications systems and for the statewide integrated public safety communications interoperability system as it is implemented.
10. Expand, maintain, and fund stakeholder education, public education, and public official education programs to demonstrate the value of short-term communications interoperability solutions, and to emphasize the importance of developing and funding long-term solutions, including implementation of the statewide integrated public safety communications interoperability system.
11. Identify, promote, and provide incentives for appropriate collaborations and partnerships among government entities, agencies, businesses, organizations, and associations, both public and private, relating to communications interoperability.
12. Provide incentives to support maintenance and expansion of regional efforts to promote implementation of the statewide integrated public safety communications interoperability system.
13. In performing its duties, consult with representatives of private businesses, and associations on technical matters relating to data, video, and communications interoperability; technical developments in private industry; and potential collaboration and partnership opportunities.
14. Submit a report by January 1, annually, to the member of the general assembly regarding communications interoperability efforts, activities, and effectiveness at the local and regional level, and shall include a status report regarding the development of a statewide integrated public safety communications interoperability system, and funding requirements relating there to.

Ch. 2.3 Membership

The ISICSB membership is established by Iowa Code Section 80.28 and includes a representative from the following agencies and disciplines:

Municipal Police Department

Sheriff's Office

Fire Department

Law Communication Center Manager

Local Emergency Management Coordinator

Emergency Medical Service Provider

At-Large Member

The General Assembly (4 non-voting members)

Ch. 2.4 Meeting Schedule

The ISICSB Board meets at 10:30 a.m. Central Time on the second Thursday of each month. The meeting is hosted in person with an online capability unless other arrangements are made.

Ch. 2.5 TICP Maintenance and Update

The ISICSB has the responsibility to ensure this document is reviewed annually. Requests for modifications or additions to this document should be submitted by email to the Iowa SWIC for distribution to the ISICSB. Updates to this document can be recommended by any of the participating agencies. Agencies participating in this plan will be formally notified of any modifications or additions to this TICP.

Ch. 2.5(a) Version Control

To reduce the possibility of conflicting or outdated information, the ISICSB will maintain the authoritative version of this TICP which is available by request at the ISICSB website. In the event of contradictory information in different TICP versions, the information contained in the version available via the ISICSB website shall be the authoritative version.

Ch. 2.6 Agency Responsibilities and Rights

Agencies retain the following rights and responsibilities:

Authorized representatives of agencies participating in this plan have the authority to request the use of equipment, including systems and mobile assets, in accordance with SOPs and Standard Operating Guidelines (SOGs).

Agencies retain the right to decide when and where to participate in interoperable communications. For example, agencies will retain the right to accept or decline a patch to a gateway system to provide interoperable communications during an incident.

Where applicable, agencies are responsible for consistently maintaining, testing, and exercising connectivity to interoperable communications.

Agencies may develop MOUs and/or additional agreements in support of interoperable communications, as needed. TICP policies and procedures for equipment request, deployment, and use do not supersede existing agency contracts or agreements. Costs incurred by equipment and/or personnel deployments should be addressed through existing regional mutual aid agreements.

Ch. 2.7 Prioritization and Shared Use of Regional Interoperability Assets

In response to events or incidents which cross over political jurisdictions, there may be competing demands and priorities for interoperable communications assets.

Until Incident Command (IC) is established, the lead agency designee in cooperation with assisting agencies, will have the authority to designate the use of interoperable assets. Once IC has been established, designated Command Staff or Communications Unit Leaders (COMLs) direct further coordination and deployment of communications assets assigned to the event or incident.

Agencies should judiciously activate needed interoperable assets to effectively respond to the incident/event while minimizing any negative impact on surrounding agencies or jurisdictions. Specifically, interoperable communications should be established in the following order of operations whenever possible.

Use face-to-face communications wherever appropriate, such as co-locating Command and General Staff at a single location to provide for direct communications.

Employ local communications assets until such time as either those assets become taxed or inadequate based on the nature and/or scope of the incident.

If response agencies are users of a shared system, utilize that shared system to establish interoperable communications.

If response agencies operate on disparate systems, utilize shared systems such as the Iowa Statewide Interoperability Communications System (ISICS) or mutual aid channels to establish interoperable communications.

If response agencies do not share systems or channels, utilize a gateway solution or patches at dispatch to establish interoperable communications.

Where interoperable communications cannot otherwise be established between response agencies, utilize swap or cache radios to establish operable communications for responders.

If no other method of interoperability can be established, relay communications through staff members.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below:

Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications.

Incidents where imminent danger exists to life or property.

Incidents requiring the response of multiple agencies.

Incidents involving a single agency where supplemental communications are needed for agency use.

Pre-planned events requiring mutual aid or interagency communications.

Drills, tests, and exercises.

In the event of multiple simultaneous incidents within the same priority level, the resources should be allocated with the following priorities in mind:

Incidents with the greatest level of exigency (e.g., greater threat to life or property, more immediate need, etc.) have priority over less exigent incidents.

Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options.

When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.

Chapter 3 Interoperability Systems

Ch. 3.1 Statewide Interoperable Communications Platform Defined

ISICS serves as the primary foundation of statewide interoperable communications. ISICS is used for day-to-day state and local agency operability, and statewide interoperability for National Incident Management System (NIMS) Type 3 and above incidents and events.

ISICS is an Association of Public Safety Officials (APCO) Project 25 (P25) compliant, digital trunked radio system operating in the 700/800-megahertz (MHz) frequency band. ISICS provides mobile radio coverage in more than 95 percent of the geographic area of the State of Iowa with significant portable coverage. Standards for the ISICS are located at the ISICS Board's Resources page.

Ch. 3.2 ISICS Statewide Interoperability Template

The *ISICS Standard 1.7.0 – Minimum Programming Requirements* defines the recommended ISICS programming standards for public safety radios to support channels and talkgroups designated for interoperable communications. Many agencies utilize ISICS for interoperability and daily operations and these agencies are all equipped with radios that have interoperable talkgroups programmed for their use.

Assignment of ISICS talkgroups should be coordinated via the use of StatusBoard. ISICS interoperability talkgroups are defined in Chapter 8 Appendix B, Table 6.

Ch. 3.2(a) Encrypted Talkgroups and 700 MHz Channels

The ISICSB acknowledged the need to provide communications and operational security under certain circumstances that affect interoperable communications between multiple agencies or jurisdictions. As a result, ISICSB has approved the use of P25 standard Advanced Encryption Standard (AES) 256 encryption for interoperability and assigned talkgroups/channels in the ISICS regional and statewide programming template for use by ISICS agencies for encrypted interoperable communications.

The Board established guidelines for the programming and use of encrypted talkgroups and channels. The guidelines are included in Appendix B of this Plan.

For the purposes of this section, unless otherwise stated, authorized radios shall be limited to those controlled by public safety agencies as defined by the ISICSB. Further restrictions according to agency discipline may also be applicable and are identified below.

Encryption keys for these talkgroups may be provided by state-authorized encryption key providers. Encrypted talkgroups and channels are listed below with the ISICSB requirements for programming and use.

Table 1: Encryption Requirements (Example)

700 MHz Conventional	Talkgroup	Requirements
	IA TAC7E IA TAC8E IA TAC9E R1 TAC17E R1 TAC18E R1 TAC19E R2 TAC27E R2 TAC28E R2 TAC29E R3 TAC37E R3 TAC38E R3 TAC39E R4 TAC47E R4 TAC48E R4 TAC49E R5 TAC57E R5 TAC58E R5 TAC59E R6 TAC67E R6 TAC68E R6 TAC69E	May be programmed into any radio identified in Section I of this document, including Public Safety Communications Centers (PSCCs).
7MED86E and 7MED87E		May only be programmed into fire department-controlled radios or government contracted private ambulance-controlled radios for emergency medical related coordination, cache radio or approved COM-L/S/T radio.

Ch. 3.3 NON-ISICS Conventional Interoperable Systems

The Federal Communications Commission (FCC) Region 15 Regional Planning Committee coordinates the use of base stations and repeaters using the 700 MHz and 800 MHz NPSPAC frequencies in the region. A complete list of regional repeaters is depicted in Appendix F.

Ch. 3.4 NON-ISICS Local Systems

There are also non-ISICS local systems operating in Iowa which have their own unique stand-alone policies and procedures based on operational needs of the participating agencies.

Ch. 3.4(a) NON-ISICS System Overview

These systems may be used for day-to-day operability within each agency, interoperability between agencies and statewide interoperability, when necessary. The concept of an interoperable system is based on common channels/talkgroups between systems. These systems exist in all radio bands [Very High Frequency (VHF), Ultra High Frequency (UHF), and 700/800 MHz] and may gateway to ISICS talkgroups for additional inter-system interoperability.

There is fixed infrastructure throughout the State that allows a non-ISICS interoperable system to communicate with the ISICS system. In some instances, interoperable talkgroups on the ISICS are linked to specific talkgroups on other systems.

Examples of off-system (non-ISICS) statewide resources and national non-federal interoperable channels:

VHF Band: VCALL10, VTAC11-14

UHF Band: UCALL40, UTAC41-43 (repeated channels)

UCALL40D, UTAC41D-43D talk-around/direct/non-repeated.

700MHz Band: 7TAC73, 7TAC74

700 MHz directs: To include ITALKs and Air to Ground Channels

800MHz Band: 8CALL90, 8TAC91-94 (repeated channels)

8CALL90D, 8TAC91D-94D talk-around/direct/non-repeated.

A complete list of statewide non-ISICS system-to-system shared channels available to all relevant disciplines in the State of Iowa can be found in Appendix B-3.

Ch. 3.4(b) Shared Interoperability Channels

"Shared interoperability channels" are those which are utilized by more than one department or agency. "Channel," in this context, refers to the name of a common frequency or talkgroup visually displayed on a user's radio.

Ch. 3.4(c) Regional and Statewide Interoperability Channels and Talkgroups

Regional and Statewide Interoperability Channels and Talkgroups are designated for statewide use by fire, police, or EMS to provide interagency communications between counties and other local government agencies. Specific statewide shared interoperable communication channels and their intended use that are available within region boundaries and statewide. They are listed in Appendix B-3.

Ch. 3.4(d) Nationwide Interoperability Channels

The FCC predefined a set of non-federal, nationwide interoperability channels in designated public safety spectrum bands. These channels are designed to provide the public safety community with a set of channels with predetermined operational parameters that serve as a basis for initial on-the-scene coordination and resolution of local interoperability issues.

These nationwide mutual aid channels are designed to provide multiple agencies with a common set of operating frequencies and parameters for specific uses in an incident location for fire, police, or EMS.

Based on FCC regulations, local government agencies that have a valid Part 90 license may install these channels in existing mobile and portable radios. When responding to an emergency where the need for interoperability is demonstrated, responders may use one or more of the available frequencies, as warranted by the incident.

The responsibility for management and assignment of available frequencies rests with the COML and/or its designee. Nationwide shared channels are listed in Appendix C of this Plan. These channels and their usage requirements are also detailed in the National Interoperability Field Operations Guide (NIFOG).

Ch. 3.4(e) Nationwide Mutual Aid or Common Channels

In addition to the Nationwide Interoperability channels, the FCC has also set aside channels for use by specific disciplines operating under statewide plans. Nationwide Mutual Aid or Common channels are listed in Appendix C of this Plan. These channels and their usage requirements are also detailed in the NIFOG.

Chapter 4 Communications Resources

Ch. 4.1 Interoperability Repeaters and Base Stations

Some jurisdictions deployed radio repeaters and/or base stations that operate on one or more interoperable channels allowing efficient coordination of first responders during an incident or planned event. These may be in fixed positions using permanent towers or may be transportable, allowing for deployment at or near the incident scene. Interoperability repeaters and base stations are listed in Appendix F.

Ch. 4.2 Gateways

"Gateway" systems interconnect (patch) channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles that create patches are also shown here as gateways.

Available Fixed and Mobile Gateways and Statewide Gateways are listed in Appendix G. The general procedures and best practices for the request, deployment and use of these gateways and any other communications resources are provided in Appendix O-2(c) of this Plan.

Ch. 4.3 Cache Radios

Cache radios, also known as "swap radios," refer to the establishment of a reserve of standby radios that are deployed to support interoperable communications during an incident. Cache radios allow all responders to use common, compatible equipment during an incident. Radio cache information is provided in Appendix J.

The general procedures and best practices for the request, deployment and use of these caches and any other communications resources are provided in Appendix O-2(e) of this Plan.

Ch. 4.3(a) Cache Radio Programming

All radio caches are required to have, at a minimum, the channels and/or talkgroups programmed as appropriate for their frequency band. The list of radio cache channels can be found in Appendix J.

Ch. 4.4 Mobile Communications Unit (MCU)

A Mobile Communications Unit (MCU) [also known as a Mobile Communications Center (MCC), Mobile Communications Vehicle (MCV), or Mobile Emergency Operations Center (MEOC)] refers to any vehicular asset that can be deployed to provide or supplement communications capabilities in an incident area.

Examples of the types of communications devices an MCU can house include:

Subscriber and base station radios of various frequency bands, gateway devices, satellite phones,

wireless computer networks, and cideo broadcasting/receiving equipment.

Typically, these communications devices are permanently located/stored in the MCUs when not used. The MCU should also be able to temporarily provide the electrical power required to operate the communications devices. Detailed technical specifications on each MCU are provided in Appendix K.

Ch. 4.5 Communication Alternatives

The following alternative communications methods may be considered, based on local communications requirements.

Telephone Conference Bridges

Telephone conference bridges permit direct communication among several users, assuming they have access to telephone services.

Video Conferencing

Video conferencing permits direct communication among several users, assuming they have access to video conference services.

Cellular/Push-to-Talk Commercial Wireless Technology

Cellular/Push-to-talk/Radio over Internet Protocol (ROIP) commercial wireless technology is available as an adjunct to interoperable communications. During emergencies, cellular networks can experience congestion due to increased call volumes and/or damage to network facilities, severely curtailing the ability of first responders to make emergency calls. In addition, local experience has shown power losses when usage exceeds four hours. Use of cellular technology should be discouraged unless necessary, and generator use should be considered a priority to maintain operational capability.

Wireless Priority Service (WPS)

Key Federal, State, local, and tribal government, and critical infrastructure personnel are eligible for WPS.[1] Typical users are responsible for the command-and-control functions critical to management of and response to national security and emergency situations. WPS is an easy-to-use, add-on feature subscribed on a per-cell phone basis; no special phones are required.

Government Emergency Telecommunications Service (GETS)

An emergency telephone service provided and managed by the Cybersecurity and Infrastructure Security Agency (CISA). GETS[2] subscribers have priority access and processing of local and long-distance landline telephone networks. GETS provides priority access but does not preempt in-progress calls or deny the public's use of the network.

Telecommunications Service Priority (TSP)[2]

An FCC program, managed by CISA, which requires service providers prioritize circuit and restoration requests for voice and data services and repairs when the request is made by national security and emergency preparedness organizations or missions.

Computerized Emergency Notification System

A computerized emergency notification system can be programmed to contact specific individuals and agencies based on lists or geographic location, depending on the nature of the incident. This includes the ability to send messages to appropriate media outlets, which could be used to inform the public of situation updates, specific instructions, and/or emergency locations if warranted. Each county and its designated entities have the capability to broadcast emergency notifications, in multiple languages and through multiple modes, such as reverse 9-1-1 systems, resident opt-in lists, a phone application, social media, and other modes.

Internet/E-mail

A lesson learned from September 11, 2001, was the reliability and usefulness of the Internet and e-mail. While conventional communications services (e.g., wireless phones and landlines) were either damaged or overwhelmed, the Internet was operational and provided an invaluable service to the public.

Law Enforcement Agencies Data Systems

[1] Wireless Priority Service: https://www.cisa.gov/wireless-priority-service

[2] Government Emergency Communications Service: https://www.cisa.gov/about-pts

Directed Messages can be sent terminal to terminal. Most law enforcement communications centers have these connection capabilities.

Satellite Phones

A satellite phone is a type of mobile phone that connects to orbiting satellites instead of cell sites. Some satellite phone services depend on the terrestrial phone system for message transmission while others offer direct satellite-to-satellite message transmission.

Dispatch Center to Dispatch Center Messaging

Dispatch centers may share a common computer-aided dispatch (CAD) system capable of providing text messaging between centers.

CAD to CAD Interface Systems

The CAD-to-CAD Interface systems provide a real-time interface between each of the CAD systems used by dispatch centers in and around the State of Iowa. It provides users of one CAD system the ability to keep informed of critical incidents being handled in nearby jurisdictions.

Electronic Incident Management

Electronic Incident Management systems may be browser or client-based and provide incident management and situational awareness for active incidents and events. These systems may be used to manage incidents, provide timely notifications and incident updates to critical staff as well as internal staff and the public.

Web Emergency Operations Center (WebEOC)

WebEOC is used for planning, responding, and managing issues related to emergency management. WebEOC enables multiple entities to share critical information when collaborating in the preparation, response, resolution, and review processes associated with daily activities, events, and incidents.

Homeland Security Information Network (HSIN) Connect

HSIN Connect is an electronic collaboration and situational awareness system provided through the Homeland Security Information Network, operated by the Department of Homeland Security (DHS). HSIN Connect allows anyone with a computer and an internet connection to view and participate in online briefings and discussions. HSIN offers quick links to regional and national-level web conferencing rooms to allow users to connect with their peers. Users may also create or participate in their own meetings at any time to conduct interactive online meetings and share content with anyone, regardless of whether they are a HSIN user.

Runner System

In the unlikely event that the intra-jurisdictional interoperability channels and back-up systems are all unavailable, the incident commander can arrange for a “runner system” in which designated personnel carry messages from one function to another.

Mobile Architecture for Communications Handling (MACH)

MACH software is the next generation 3CS (Collaborative Command and Control Software) application. With MACH, national model agencies can collaborate during daily activities and emergency events. MACH features include real-time data allowing unit and incident locations, real-time and custom mapping, instant messaging and multi-unit or unit-to-dispatch capabilities, and cross-agency communication.

StatusBoard

The StatusBoard application, maintained by the ISICSB and the Iowa Department of Public Safety (DPS), is a statewide, web-based tool for dispatchers, agency command and Communications Unit (COMU) personnel accessible through the Internet. It is intended to help coordinate use of interoperable communications resources (e.g., talkgroups or channels) that are available for urgent, emergent, or preplanned events. The StatusBoard application is described in Chapter 8.

Chapter 5 Amateur Radio

Ch. 5.1 Amateur Radio Emergency Service (ARES)

A program of American Radio Relay League (ARRL), the National Association of Amateur Radio in the US. ARES consists of amateur radio operators who volunteer their time, talents, and equipment to provide emergency communications when needed. ARES groups are structured at the county level and may be aligned with Emergency Management functions within the county.

Ch. 5.2 Radio Amateur Civil Emergency Service (RACES)

A volunteer organization of licensed amateur radio operators registered with the Civil Defense organization to provide auxiliary emergency communications on behalf of local, state, or federal government under authority granted in 47 CFR, Part 97, subpart E.

Due to the structure of the Federal Emergency Management Agency (FEMA), each RACES group is administrated by a local government agency responsible for disaster services. RACES may be activated by the appointed Director of an Emergency Management Office, or authorized representative, for an area. The activation is in accordance with an approved civil defense communications plan.

Chapter 6 Regional Emergency Resource Staffing

Ch. 6.1 Incident Command System (ICS) COMU Positions

Roles and responsibilities for each of the COMU positions are detailed below.

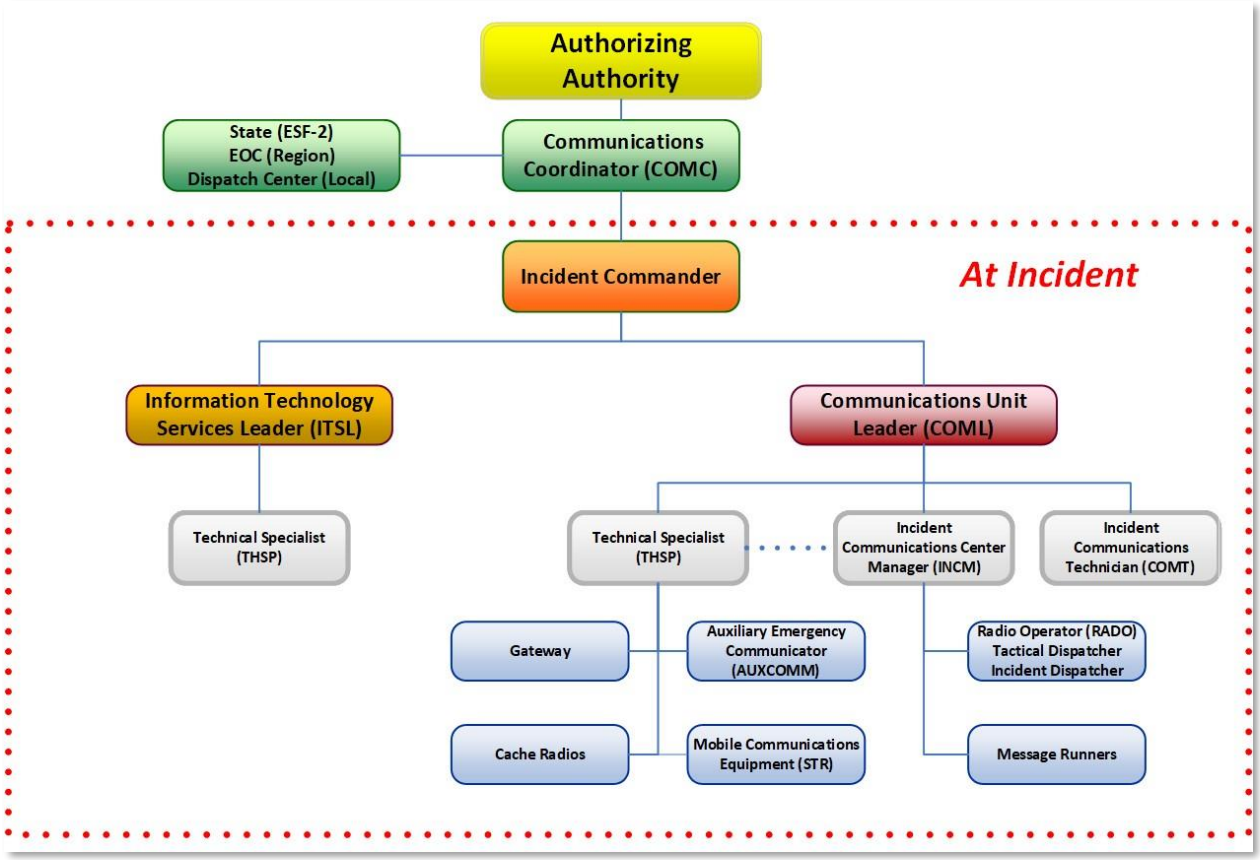


Figure 3: ICS COMU Organization

Ch. 6.1(a) Dispatch Center

Communications Coordinator (COMC) – This external position supports communications, but outside the COML's chain of command. The position is often filled by an ESF #2 Communications representative in an EOC, designated frequency coordinator/advisor, or an ECC supervisor.

Ch. 6.1(b) At an Incident/Event

COML – Manages the technical and operational aspects of the Communications Function during an incident or event. Develops NIMS/ICS Form 205 Incident Radio Communications Plan and supervises the COMU.

Information Technology Unit Leader (ITSL) - Is responsible for the provision and support of computer hardware, system, and application software as well as data communications and IT services infrastructure during an incident or event.

Communications Technician (COMT) – Deploys advanced equipment and keeps it operational throughout the incident/event.

Technical Specialist (THSP) – Allows for the incorporation of personnel who may not be formally qualified in any specific NIMS/ICS position. THSPs may include local agency Radio Technicians (as opposed to the COMT), Auxiliary Communicators, Telephone Specialists, Gateway Specialists, Data/IT Specialists, and or Cache Radio Specialists.

Ch. 6.2 NIMS Communications Unit Training

COMU Leaders, Coordinators, and Technicians

Minimum training for all COMU positions shall include as a prerequisite the following classes:

IS-100.b – (ICS 100) Introduction to Incident Command System

IS-200.b – (ICS 200) ICS for Single Resources and Initial Action Incidents

ICS-300 – Intermediate ICS for Expanding Incidents (only required for COML training)

IS-700.a – (ICS 700) National Incident Management System (NIMS), an Introduction

IS-800.b – (ICS 800) National Response Framework (NRF), an Introduction

Note that the IS- training programs are EMA Independent Study (online) courses, while ICS-300 is a 3-day course.

Ch. 6.3 Auxiliary Communications (AUXCOMM)

AUXCOMM groups, supporting either emergency operations or planned events, are composed of knowledgeable individuals who are familiar with various aspects of radio communications in their area of responsibility and who can provide multiple and redundant communications avenues in case of emergency deployment. Members may also be able to address problems/issues associated with their radio systems that may arise because of the emergency. Auxiliary communicators can be a valuable backup communications resource for both planned and unplanned events.

Auxiliary communications can use a variety of frequency bands that typically include systems such as amateur radio, citizens band radio, satellite communications (SATCOM), general mobile radio service (GMRS), family radio service (FRS), and multi-use radio service (MURS). Auxiliary communicators can bring significant expertise to the operations planning process but are used primarily when primary communications become significantly disrupted or are to be used for a planned event (e.g., parades, marathons, exercises, etc.).

The following general guidelines should be met to ensure auxiliary communicators work seamlessly with NIMS/ICS personnel in an EOC or out in the field:

Auxiliary communicators should be formally trained on NIMS/ICS prior to working with public safety personnel. At a minimum, IS-100, 200, 700 and 800 should be completed by the individual. Should additional training be required for these communicators, it should be documented as such within an SOP, MOU, or MOA.

Auxiliary communicators are only used when deemed necessary by command personnel.

While most auxiliary communicators are volunteers, all auxiliary communicators must follow the directions of the COML and/or their designee.

The COML should brief auxiliary communicators on what is expected of them during activation, so they are fully aware of their requirements. This way, should they be unable to accept those requirements, the COML can make the decision as to whether that individual should participate during the incident/event.

Auxiliary communicators should only use the NIMS/ICS forms authorized by FEMA, during training or activation, to ensure standardization with the rest of the command staff administrative procedures.

Unless authorized by the emergency manager, or the COML, the auxiliary communicators should not bring their organization/club brand, or their personal equipment, into an operational environment.

If several different auxiliary communications groups are available in an area, consider creating a coalition group. Representatives from several groups can sometimes work more effectively than only one group. Designate one auxiliary communications manager to work directly with the COML under these conditions.

Auxiliary communications are not encrypted, so anything they may send could be listened to by anyone. No sensitive information should ever be sent via auxiliary communications.

Chapter 7 Communications Assets Survey and Mapping (CASM)

CASM is a web-based software application that allows public safety agencies to inventory and access communications data entered by a broad spectrum of users nationwide through a single, consolidated tool. CASM provides the common operational picture that integrates many sources of information into a single application allowing for effective, efficient, and rapid resource utilization prior to a planned event or disaster response.

CASM features a comprehensive emergency communications database that provides a national high-level view of communications information that can be easily accessed and shared between any variety of jurisdictions and government types. CASM provides access for approved local, state, tribal, federal, and non-governmental organization (NGO) users to information including:

Repeaters and Base Stations

Trunked Radio Systems

Shared Channels and Talkgroups

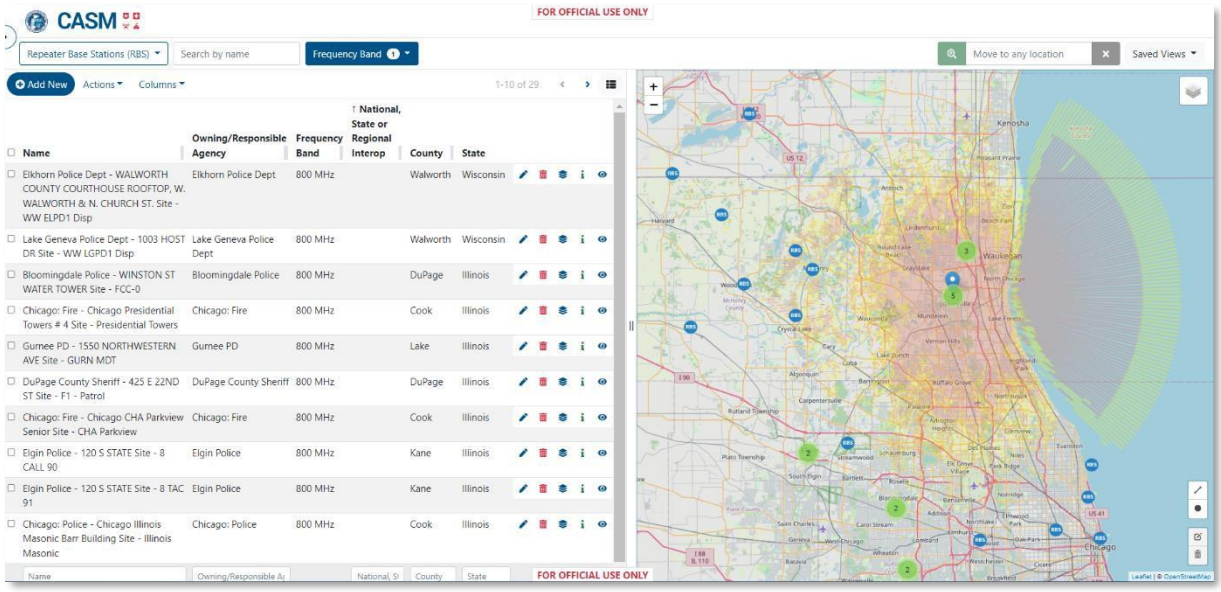
Mobile Resources (Mobile Units, Radio Caches, etc.)

Communications Unit Personnel

Radio System Comm Sites and Infrastructure

Public Safety Agencies

System Metrics



CASM data is filterable by type and can be overlaid on a Google Maps interface or accessed through standardized tables. A single consolidated user interface provides a common look and feel for all screens. Access is profile-based so that users only have access to information that they are authorized to view and/or edit. The system is virtually hosted, eliminating the need for dedicated hardware, reducing cost, and streamlining maintainability and increasing overall availability.

Ch. 7.1 CASM Key Features and Capabilities

Feature	Description
User Access Availability and Data Security	Provides a high-availability web-based automated communication planning capability for representatives of public safety practitioners at all jurisdictional levels. User access to CASM requires user account sign-in, access controlled with username and password. CASM employs advanced encryption protocols to protect the security of public safety data transferred across the internet.
User Access Control	Provides comprehensive access control managed and vetted by organizational administrative personnel.
	Allows organizational administrative managers the ability to grant, modify or remove information sharing privileges for their organization's data types to users associated with agencies related to specific organization nodes.
Data Entry/Edit	Using a consistent user interface CASM provides the capability to enter, edit, or delete public safety radio and data communications assets, including fixed and deployable equipment, infrastructure, users, spectrum usage, owners, locations, and capabilities nationwide.
Data Export/Reporting	CASM reports, and export features include public safety radio and data communications assets, including equipment, infrastructure, users, spectrum usage, owners, locations, and capabilities nationwide. Provides users with the ability to rapidly generate planning and operational documents such as ICS 217A Reports and TICP Reports.
Data Display	Communication resources and equipment of all types are filtered and displayed graphically using a map-based interface which can also be toggled to provide a table view for enhanced filtering and identification.
Coverage Plot Generation	Provides the ability to generate predictive coverage plots which show the estimated areas of radio coverage for base station radios.

Authorization to view data for a specific state or county is controlled by a CASM Administrative Manager (AM); each user must have a username and password to login. CASM logins are further protected by requiring the use of multi-factor authentication (MFA) or Federal Information Processing Standard Publication 201 (FIPS 201} cards (Common Access Card (CAC)/Personal Identify Verification (PIV)).

Chapter 8 StatusBoard

The StatusBoard application assists with local agency coordination. Resources, which is the name given to channels and talkgroups, can be reserved and coordinated with other users through web browser functionality.

Goals of StatusBoard

- Allow agencies to locally manage and control communications resources for their events.
- Allow for local and inter-agency coordination of interoperable resources.
- Enhance planning capabilities of Communication Unit Leaders (COMLs).

Who Gets Access and Where

- Any authorized user can access StatusBoard 2.0 from anywhere with internet access.
- End Users can be view only or have full access to reserve resources.
- Administrators can create user accounts and resources.
- Super Users can change system level settings.

Logging In

- A valid username and password are needed to access StatusBoard.
- Account will be locked after 5 failed attempts to log in.
- Passwords can be reset.
    - An email will be sent to your email address on file.
- Accounts can be unlocked by an administrator or the SWIC.

Scheduling a Resource

- Resources can be scheduled immediately by clicking “Quick Schedule” or for planned future use through the calendar scheduling function.

Authorization to access StatusBoard is maintained by the SWIC. Each user must have a unique username and password to access StatusBoard. Access can be requested by emailing the SWIC at nichols@dps.state.ia.us

Appendix A Dispatch Centers

Appendix A-1 Dispatch Center Summary

Table 2: Dispatch Center Information

County / Co #	Dispatch Center	Location	24/7 Phone
Adair / 01	Adair Co. Sheriff's Office	302 E Iowa St., Greenfield, IA	641-743-2148
Adams / 02	Adams Co. Sheriff's Office	901 Davis Ave., Corning, IA	641-322-4444
Allamakee / 03	Allamakee Co. Sheriff's Office	877 Hwy. 9., Waukon, IA	563-568-4521
Appanoose / 04	Centerville 911	22158 Dewey Rd., Centerville, IA	641-437-7100
Audubon / 05	Audubon Co. 911 Communications	318 Leroy St., Audubon, IA	712-563-2631
Benton / 06	Benton Co. Sheriff's Office	113 East 3rd St., Vinton, IA	319-472-2337
Black Hawk / 07	Black Hawk Consolidated Communications Center	225 E 6th St., Waterloo, IA	319-291-2515
Boone / 08	Boone Co. Communications	1019 W. Mamie Eisenhower, Boone, Iowa, IA	515-433-0524
Bremer / 09	Bremer Co. Waverly Law Center	111 4th St. NE, Waverly, IA	319-352-5400
Buchanan /10	Buchanan Co. Communications Center	210 5th Ave. NE, Independence, IA	319-334-2567
Buena Vista / 11	Buena Vista Co. 9-1-1 Communications Center-Storm Lake	411 Expansion Blvd., Storm Lake, IA	712-749-2525
Butler / 12	Butler Co. Sheriff's Office	428 6th St., Allison, IA	319-267-2410
Calhoun / 13	Calhoun Co. Sheriff's Office	416 4th St., Rockwell City, IA	712-297-7583
Carroll / 14	Carroll Co. Communications	114 E. 6th St., Carroll, IA	712-775-2294
Cass / 15	Cass Co. Public Safety Communications Center	705 Poplar St., Atlantic, IA	712-243-2204
Cedar / 16	Cedar Co. Sheriff's Office	711 E. South St., Tipton, IA	563-886-2121
Cerro Gordo / 17	Cerro Gordo Co. Sheriff	17262 Lark Ave., Mason City, IA	641-421-3000
Cerro Gordo / 17	Clear Lake PD	511 1st Ave., North Clear Lake, IA	641-357-2186
Cherokee / 18	Cherokee Co. Sheriff	111 N 5th St., Cherokee, IA	712-225-6728
Chickasaw / 19	Chickasaw Co.	116 N Chestnut Ave., New Hampton, IA	641-394-3121
Clarke / 20	Clarke Co. Sheriff's Office	220 Townline Rd., Osceola, IA	641-342-2914
Clay / 21	Clay Co. PSAP	712 Grand Ave., Spencer, IA	712-262-2151
Clayton / 22	Clayton Co. Sheriff's Office	22680 230th St., Saint Olaf, IA	563-245-1414
Clinton / 23	Clinton Co. Communications	241 7th Ave., North Clinton, IA	563-243-1458
Crawford / 24	Crawford Co. Communications Center	1119 1st Ave., North Denison, IA	712-263-3195
Davis / 26	Davis Co. Law Center	102 Anderson St., Bloomfield, IA	641-664-2700
Decatur /27	Decatur Co. Sheriff's Office	206 NE 2nd St., Leon, IA	641-446-4111
Delaware / 28	Delaware Co. Communication Center	208 East Main St., Manchester, IA	563-927-1145
Des Moines / 29	DESCOM - Des Moines Co.	1401 W Agency Rd, Ste. #070 West, Burlington, IA	319-671-7001
Dickinson / 30	Dickinson Co. Sheriff's Office	1802 Hill Avenue, Ste. 1200, Spirit Lake, IA	712-336-2525
DPS	Cedar Falls Comm Center	1510 W. 1st St., Cedar Falls, IA	319-277-4761
DPS	Cedar Rapids Comm Center	5400 16th Ave. SW, Cedar Rapids, IA	319-396-4414

DPS	Johnston Comm Center-STARC Armory	6100 NW 78th Ave., Johnston, IA	515-323-4360

County / Co #	Dispatch Center	Location	24/7 Phone
DPS	Storm Lake Comm Center	1103 E Lakeshore Dr., Storm Lake, IA	712-732-1341
Dubuque / 31	Dubuque Co. Communications Center	770 Iowa St., Dubuque, IA	563-583-1711
Emmet / 32	Emmet Co. E911	114 North 6th St., Estherville, IA	712-362-3515
Fayette / 33	Fayette Co. Sheriff's Office	220 N. Industrial Pkwy., West Union, IA	563-422-6128
Floyd / 34	Floyd Co. Communications Center	105 Milwaukee Mall, Charles City, IA	641-228-3366
Franklin / 35	Franklin Co. Emergency Management Communications	105 5th St. SW, Hampton, IA	641-456-2731
Fremont / 36	Fremont Co. Sheriff's Office	2814 200th St., Sidney, IA	712-374-2424
Greene / 37	Greene Co. Sheriff's Office	204 S Chestnut St., Jefferson, IA	515-386-2136
Grundy / 38	Grundy Co. Sheriff's Office	705 8th St., Grundy Center, IA	319-824-6933
Guthrie / 39	Guthrie Co. Sheriff's Office	200 N 5th St. Ste. 7, Guthrie Center, IA	641-747-2214
Hamilton / 40	Hamilton Co. Sheriff's Office	2300 Superior St. Ste. 8, Webster City, IA	515-832-9500
Hancock / 41	Hancock Sheriff's Office	875 State St., Garner, IA	641-923-2621
Hardin / 42	Hardin Co. Sheriff	1116 14th Ave., Eldora, IA	641-939-8190
Harrison / 43	Harrison Co. Communications	111 S 1st Ave., Logan, IA	712-600-9770
Henry / 44	Henry Co. Sheriff's Office	106 E Clay St., Mt Pleasant, IA	319-385-2712
Howard / 45	Howard Co. Sheriff Office	124 South Park Pl., Cresco, IA	563-547-3535
Humboldt / 46	Humboldt Co. Law Enforcement Center	430 Sumner Ave., Humboldt, IA	515-332-2600
Ida / 47	Ida Co. Sheriff's Office	401 Moorehead St., Ida Grove, IA	712-364-3146
Iowa / 48	Iowa Co. Sheriff's Office	960 Franklyn Ave., Marengo, IA	319-642-7307
Jackson / 49	Maquoketa PD	102 S Niagara St., Maquoketa, IA	563-652-2468
Jasper / 50	Jasper Co. Sheriff's Office	2300 Law Center Dr., Newton, IA	641-792-5912
Jefferson / 51	Jefferson Co. Law Center	1200 West Grimes, Fairfield, IA	641-472-4146
Johnson / 52	Johnson Co. Joint Emergency Communications Services Association	4529 Melrose Ave., Iowa City, IA	319-356-6800
Jones / 53	Jones Co. Sheriff	500 West Main St., Anamosa, IA	319-462-4371
Keokuk / 54	Keokuk Co. Sheriff's Office	204 S Stone St., Sigourney, IA	641-622-2727
Kossuth / 55	Algona PD	121 West State St., Algona, IA	515-295-3515
Lee / 56	Lee Co. PSAP (LeeComm)	2530 255th St., Montrose, IA	319-372-1310
Linn / 57	Cedar Rapids Joint Communications Agency	505 1st St. SW, Cedar Rapids, IA	319-286-5491
Linn / 57	Linn Co. Sheriff's Office	310 2nd Ave. SW, Cedar Rapids, IA	319-398-3911
Linn / 57	Marion PD	6315 Hwy. 151, Marion, IA	319-377-1511
Louisa / 58	Louisa Co. Sheriff's Office	12635 County Rd. G56 Ste. 102, Wapello, IA	319-523-4371
Lucas / 59	Lucas Co. Sheriff's Office	48559 Hy-Vee Rd., Chariton, IA	641-774-5083
Lyon / 60	Lyon Co. Sheriff	410 South Boone St., Rock Rapids, IA	712-472-8300
Madison / 61	Madison Co. Sheriff's Office	1012 N John Wayne Dr., Winterset, IA	515-462-3575
Mahaska / 62	Mahaska Co. 911 Center	214 High Ave. East, Oskaloosa, IA	641-673-0347
Marion / 63	Marion Co. Sheriff's Office	211 North Godfrey Ln., Knoxville, IA	641-828-2220
Marion / 63	Pella PD	614 Main St., Pella, IA	641-628-4921

Marshall / 64	Marshall Co. Communications Center	909 S 2nd St., Marshalltown, IA	641-754-5725

County / Co #	Dispatch Center	Location	24/7 Phone
Mills / 65	Mills Co. Communications Center	418 Sharp St., Glenwood, IA	712-527-4871
Mitchell / 66	Mitchell Co. Communications Center	211 S 6th St., Osage, IA	641-732-4740
Monona / 67	Monona Co. Sheriff's Office	909 7TH St., Onawa, IA	712-433-2525
Monroe / 68	Monroe Co. Sheriff Office	114 19th Ave. West, Albia, IA	641-932-7815
Montgomery / 69	Montgomery Co. Sheriff's Office	106 W Coolbaugh St., Red Oak, IA	712-623-5107
Muscatine / 70	MUSCOM	312 East 5th St., Muscatine, IA	563-263-9922
O' Brien / 71	O'Brien Co. Sheriff	240 1st St. NE, Primghar, IA	712-757-3415
Osceola / 72	Osceola Co. Sheriff's Office	309 6th St., Sibley, IA	712-754-2556
Page / 73	Page Co. Communications Center	200 S. 15th St., Clarinda, IA	712-542-1419
Palo Alto / 74	Palo Alto Communications Center	2001 11th St., Emmetsburg, IA	712-852-3535
Plymouth / 75	Plymouth Co. Sheriff Office	451 14th Ave. NE, Le Mars, IA	712-546-8191
Pocahontas / 76	Pocahontas Sheriff's Office	99 Court Sq., Ste. 9, Pocahontas IA	712-335-3308
Polk / 77	Des Moines PD	25 East 1st St., Des Moines, IA	515-283-4811
Polk / 77	Polk Co. Sheriff's Office	6023 NE 14th St., Des Moines, IA	515-286-3334
Polk / 77	Westcom Emergency Communications	8055 Mills Civic Pkwy., West Des Moines, IA	515-222-3321
Pottawattamie / 78	Pottawattamie Co. Law Enforcement 911 Center	227 S 6th St., Council Bluffs, IA	712-328-5737
Poweshiek / 79	Poweshiek Co.	4802 Barnes City Rd., Montezuma, IA	641-623-5679
Ringgold / 80	Ringgold Co. Sheriff's Office	801 W South St., Mount Ayr, IA	641-344-9691
Sac / 81	Sac Co. Sheriff's Office	116 S State St. Ste. C, Sac City, IA	712-662-7127
Scott / 82	Scott Emergency Communications Center (SECC)	1100 E. 46th St., Davenport, IA	563-484-3000
Shelby / 83	Shelby Co. Communications	612 Court St., Harlan, IA	712-755-2124
Sioux / 84	Sioux Co. Sheriff's Office	4363 Ironwood Ave., Orange City, IA	712-737-3307
Story / 85	Ames PD	515 Clark Ave., Ames, IA	515-239-5133
Story / 85	Story Co. Sheriff's Office	1315 S B Ave., Nevada, IA	515-382-6566
Tama / 86	Tama Co. 911 Communication Center	100 N Main St., Toledo, IA	641-484-3760
Taylor / 87	Taylor Co. Sheriff's Office	1601 Justice St., Bedford, IA	712-523-2153
Union / 88	Union Co. Sheriff's Office	302 N Pine St., Creston, IA	641-782-8402
Van Buren / 89	Van Buren Co.	907 Broad St., Keosauqua, IA	319-293-3426
Wapello / 90	Ottumwa PD	330 W 2nd St., Ottumwa, IA	641-683-0661
Wapello / 90	Wapello Co. Sheriff's Office	330 W 2nd St., Ottumwa, IA	641-684-4350
Warren / 91	Warren Co. Sheriff's Office	115 North Howard St., Indianola, IA	515-961-1122
Washington / 92	Washington Co. 911	221 West 2nd St., Washington, IA	319-653-2107
Wayne / 93	Wayne Co.	207 North Lafayette, Corydon, IA	641-872-1566
Webster / 94	Webster Co. Telecommunications	702 1st Ave. South, Fort Dodge, IA	515-573-2323
Winnebago / 95	Winnebago Co. Communications	935 Hwy. 69 N, Forest City, IA	641-585-8800
Winneshiek / 96	Decorah PD	400 Claiborne Dr., Decorah, IA	563-382-3667
Woodbury / 97	Woodbury Co. Communications	4647 Stone Ave., Sioux City, IA	712-279-6960

Worth / 98	Worth Co. Sheriff's Office	1000 Central Ave., Northwood, IA	641-324-2481
Wright / 99	Wright Co. Communications	719 2nd St. SW, Clarion, IA	515-532-3722

Appendix B Shared Systems

Detailed information on shared systems available for use in Iowa is listed in subsequent pages of Appendix B. The table below lists the shared systems.

Appendix B-1 Shared System Summary

Table 3: Radio System Table

Radio System Name	Type	Mode	Band	Operating Counties
Iowa Statewide Interoperable Communications System (ISICS)	☐ Conventional ☒ Trunked	☐ Analog ☒ Digital	700/800 MHz	Statewide

Appendix B-2 Shared System Detail

Table 4: Radio System: Iowa Statewide Interoperable Communications System (ISICS)

Owning/Responsible Agency	State of Iowa			
State/County of Origin	Iowa			
24/7 Phone				
Primary Point of Contact	ISICS Network Operations Center			
Contact Phone	515-278-5613			
Contact Email	ISICSNOC@dps.state.ia.us			
System Frequency Band(s)	☐ VHF-High ☐ VHF-Federal ☐ 220 MHz	☐ UHF ☐ UHF-Federal ☐ Other	☒ 700 MHz ☐ HF ☐ Unknown	☒ 800 MHz ☐ VHF-Low
System Type	☐ Conventional	☒ Trunked	☐ Both	☐ Unknown
Analog or Digital	☐ Analog	☒ Digital	☐ Mixed	☐ Unknown
WACN ID (P-25 Trunked only)				
System ID (P-25 Trunked only)				
P-25 Compliance	☐ None	☐ P-25 Phase I	☒ P-25 Phase II	☐ Unknown
Bandwidth	☐ Narrowband	☐ Wideband	☐ Both	☐ Unknown
Encryption Supported	☐ None ☐ DES-XL	☒ AES ☐ DVP	☐ ADP ☐ Other	☐ DES ☐ Unknown
ISSI/IP Gateway	☐ None	☐ ISSI	☒ IP Gateway	☐ Unknown
Notes	Statewide interoperable communications platform			
Agencies Served	All			
Where Used (County)	All			

Table 5: P-25 Trunked System Encryption Keys

Key Name	Key ID (Hex)	SLN/CKR (Dec.)	Encryption Algorithm Used P25	NON-P25		
ISICS Patch Key	2000	2000	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS Public Safety 1	30B8	786	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS Public Safety 2	30B9	786	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS Public Safety 3	30BA	786	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER

Key Name	Key ID (Hex)	SLN/CKR (Dec.)	Encryption Algorithm Used			
			P25	NON-P25		
ISICS LE IOP 1	30BC	787	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS LE IOP 2	30BD	787	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS LE IOP 3	30BE	787	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS SPECIAL IOP	30BF	788	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS SPECIAL IOP	30C0	788	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER
ISICS SPECIAL IOP	30C1	788	☒ AES-256 ☐ DES-OFB	☐ ADP ☐ DES-XL	☐ DVP ☐ DVP-XL	☐ 3DES ☐ OTHER

Table 6: ISICS Interop Talkgroups

Talkgroup Name	Talkgroup ID	Decimal or Hex ID	SLN/CKR	Mode	Encryption Key (if appl)	Used By	Usage
IACALL1	3001	Dec		P25-II		All/Interop	STATEWIDE CALL
IATAC2	3002	Dec		P25-II		All/Interop	STATEWIDE TAC
IATAC3	3003	Dec		P25-II		All/Interop	STATEWIDE TAC
IATAC4	3004	Dec		P25-II		All/Interop	STATEWIDE TAC
IATAC5	3005	Dec		P25-II		All/Interop	STATEWIDE TAC
IATAC6	3006	Dec		P25-II		All/Interop	STATEWIDE TAC
IATAC7E	3007	Dec	786	P25-II		All/Interop	STATEWIDE TAC
IATAC8E	3008	Dec	786	P25-II		All/Interop	STATEWIDE TAC
IATAC9E	3009	Dec	786	P25-II		All/Interop	STATEWIDE TAC
IA EMTAC	3020	Dec		P25-II		All/Interop	STATEWIDE TAC
R1CALL11	13001	Dec		P25-II		All/Interop	REGION 1 CALL
R1TAC12	13002	Dec		P25-II		All/Interop	REGION 1 TAC
R1TAC13	13003	Dec		P25-II		All/Interop	REGION 1 TAC
R1TAC14	13004	Dec		P25-II		All/Interop	REGION 1 TAC
R1TAC15	13005	Dec		P25-II		All/Interop	REGION 1 TAC
R1TAC16	13006	Dec		P25-II		All/Interop	REGION 1 TAC
R1TAC17E	13007	Dec	786	P25-II		All/Interop	REGION 1 TAC
R1TAC18E	13008	Dec	786	P25-II		All/Interop	REGION 1 TAC
R1TAC19E	13009	Dec	786	P25-II		All/Interop	REGION 1 TAC
R1EMTAC	13020	Dec		P25-II		All/Interop	REGION 1 TAC
SR1CALL111	13011	Dec		P25-II		All/Interop	SUB REGION 1 CALL
SR1TAC112	13012	Dec		P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC113	13013	Dec		P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC114	13014	Dec		P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC115	13015	Dec		P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC116	13016	Dec		P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC117E	13017	Dec	786	P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC118E	13018	Dec	786	P25-II		All/Interop	SUB REGION 1 TAC
SR1TAC119E	13019	Dec	786	P25-II		All/Interop	SUB REGION 1 TAC

Talkgroup Name	Talkgroup ID	Decimal or Hex ID	SLN/CKR	Mode	Encryption Key (if appl)	Used By	Usage
R2CALL21	13601	Dec		P25-II		All/Interop	REGION 2 CALL
R2TAC22	13602	Dec		P25-II		All/Interop	REGION 2 TAC
R2TAC23	13603	Dec		P25-II		All/Interop	REGION 2 TAC
R2TAC24	13604	Dec		P25-II		All/Interop	REGION 2 TAC
R2TAC25	13605	Dec		P25-II		All/Interop	REGION 2 TAC
R2TAC26	13606	Dec		P25-II		All/Interop	REGION 2 TAC
R2TAC27E	13607	Dec	786	P25-II		All/Interop	REGION 2 TAC
R2TAC28E	13608	Dec	786	P25-II		All/Interop	REGION 2 TAC
R2TAC29E	13609	Dec	786	P25-II		All/Interop	REGION 2 TAC
R2EMTAC	13620	Dec		P25-II		All/Interop	REGION 2 TAC
R3CALL31	13801	Dec		P25-II		All/Interop	REGION 3 CALL
R3TAC32	13802	Dec		P25-II		All/Interop	REGION 3 TAC
R3TAC33	13803	Dec		P25-II		All/Interop	REGION 3 TAC
R3TAC34	13804	Dec		P25-II		All/Interop	REGION 3 TAC
R3TAC35	13805	Dec		P25-II		All/Interop	REGION 3 TAC
R3TAC36	13806	Dec		P25-II		All/Interop	REGION 3 TAC
R3TAC37E	13807	Dec	786	P25-II		All/Interop	REGION 3 TAC
R3TAC38E	13808	Dec	786	P25-II		All/Interop	REGION 3 TAC
R3TAC39E	13809	Dec	786	P25-II		All/Interop	REGION 3 TAC
R3EMTAC	13820	Dec		P25-II		All/Interop	REGION 3 TAC
R4CALL41	14001	Dec		P25-II		All/Interop	REGION 4 CALL
R4TAC42	14002	Dec		P25-II		All/Interop	REGION 4 TAC
R4TAC43	14003	Dec		P25-II		All/Interop	REGION 4 TAC
R4TAC44	14004	Dec		P25-II		All/Interop	REGION 4 TAC
R4TAC45	14005	Dec		P25-II		All/Interop	REGION 4 TAC
R4TAC46	14006	Dec		P25-II		All/Interop	REGION 4 TAC
R4TAC47E	14007	Dec	786	P25-II		All/Interop	REGION 4 TAC
R4TAC48E	14008	Dec	786	P25-II		All/Interop	REGION 4 TAC
R4TAC49E	14009	Dec	786	P25-II		All/Interop	REGION 4 TAC
R4EMTAC	14020	Dec		P25-II		All/Interop	REGION 4 TAC
R5CALL51	14201	Dec		P25-II		All/Interop	REGION 5 CALL
R5TAC52	14202	Dec		P25-II		All/Interop	REGION 5 TAC
R5TAC53	14203	Dec		P25-II		All/Interop	REGION 5 TAC
R5TAC54	14204	Dec		P25-II		All/Interop	REGION 5 TAC
R5TAC55	14205	Dec		P25-II		All/Interop	REGION 5 TAC
R5TAC56	14206	Dec		P25-II		All/Interop	REGION 5 TAC
R5TAC57E	14207	Dec	786	P25-II		All/Interop	REGION 5 TAC
R5TAC58E	14208	Dec	786	P25-II		All/Interop	REGION 5 TAC
R5TAC59E	14209	Dec	786	P25-II		All/Interop	REGION 5 TAC
R5EMTAC	14220	Dec		P25-II		All/Interop	REGION 5 TAC
R6CALL61	14401	Dec		P25-II		All/Interop	REGION 6 CALL
R6TAC62	14402	Dec		P25-II		All/Interop	REGION 6 TAC
R6TAC63	14403	Dec		P25-II		All/Interop	REGION 6 TAC
R6TAC64	14404	Dec		P25-II		All/Interop	REGION 6 TAC
R6TAC65	14405	Dec		P25-II		All/Interop	REGION 6 TAC

Talkgroup Name	Talkgroup ID	Decimal or Hex ID	SLN/CKR	Mode	Encryption Key (if appl)	Used By	Usage
R6TAC66	14406	Dec		P25-II		All/Interop	REGION 6 TAC
R6TAC67E	14407	Dec	786	P25-II		All/Interop	REGION 6 TAC
R6TAC68E	14408	Dec	786	P25-II		All/Interop	REGION 6 TAC
R6TAC69E	14409	Dec	786	P25-II		All/Interop	REGION 6 TAC
R6EMTAC	14420	Dec		P25-II		All/Interop	REGION 6 TAC

Table 7: Shared System Channels (for Conventional Systems)

Channel Name	Mob RX/Base TX			Mob TX/Base RX			Mode	Used By	Usage
	Freq		Tone	Freq		Tone			
*7ITALK1D	774.93125	N	$293	774.93125	N	$F7E	D		Operability & Interop
*7ITALK2D	774.95625	N	$293	774.95625	N	$F7E	D		Operability & Interop
*7ITALK3D	774.98125	N	$293	774.98125	N	$F7E	D		Operability & Interop
* Max ERP 2.5 watts A, D, P = Analog, Digital, or P-25									

Table 8: P-25 Trunked System Encryption Keys

Key Name	SLN/CKR	Key ID	Encryption Algorithm Used							
	(Dec.)	(Hex)	P25		NON-P25					
ISICS Patch Key	2000	2000	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
ISICS Public Safety	786	30B8	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30B9	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30BA	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
ISICS LE IOP	787	30BC	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30BD	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30BE	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
ISICS SPECIAL IOP	788	30BF	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30C0	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER
		30C1	☒ AES-256	☐ DES-OFB	☐ ADP	☐ DES-XL	☐ DVP	☐ DVP-XL	☐ 3DES	☐ OTHER

Appendix B-3 Statewide and Local Shared Channels and Talkgroups

Appendix B-3(a) VHF High Band

Table 9: ICS 217a – VHF

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band Description		VHF-High (Conventional) Region Name			
Ch	Chan. Config.	Channel or Talkgroup Name	Usage Locale	Mobile Receive		Mobile Transmit		A, D or M	Notes
				Freq.	Tone or NAC	Freq.	Tone or NAC		
State Agencies									
1	Simplex	CMED	EMS	155.1600	Tone B	155.1600	Tone B	A	Sac, Carroll, Green, Audubon, Guthrie, Adair
2	Simplex	CMED	EMS	155.1600	Tone D	155.1600	Tone D	A	Hardin, Marshall, Tama, Poweshiek
3	Simplex	CMED	EMS	155.1750	Tone B	155.1750	Tone B	A	Chickasaw, Butler, Bremer, Grundy, Black Hawk, Buchanan
4	Simplex	CMED	EMS	155.2050	Tone B	155.2050	Tone B	A	Mahaska, Keokuk, Monroe, Wapello, Jefferson, Davis, Van Buren
5	Simplex	CMED	EMS	155.2050	Tone C	155.2050	Tone C	A	Dubuque, Jackson, Clinton
6	Simplex	CMED	EMS	155.2050	Tone G	155.2050	Tone G	A	Adams, Union, Clarke, Taylor, Ringgold, Decatur
7	Simplex	CMED	EMS	155.2200	Tone B	155.2200	Tone B	A	Lucas, Wayne, Appanoose
8	Simplex	CMED	EMS	155.2200	Tone C	155.2200	Tone C	A	Kossuth, Winnebago, Worth, Mitchell, Hancock, Cerro Gordo, Floyd, Franklin
9	Simplex	CMED	EMS	155.2200	Tone D	155.2200	Tone D	A	Plymouth, Cherokee, Woodbury, Ida, Monona, Crawford
10	Simplex	CMED	EMS	155.2200	Tone G	155.2200	Tone G	A	Benton, Linn, Jones, Iowa, Johnson, Cedar, Washington
11	Simplex	CMED	EMS	155.2350	Tone A	155.2350	Tone A	A	Howard, Winneshiek, Allamakee, Fayette, Clayton
12	Simplex	CMED	EMS	155.2350	Tone C	155.2350	Tone C	A	Harrison, Shelby, Pottawattamie, Cass, Mills, Montgomery, Fremont, Page
13	Simplex	CMED	EMS	155.2350	Tone G	155.2350	Tone G	A	Henry, Louisa, Des Moines, Lee
14	Simplex	CMED	EMS	155.4000	Tone A	155.4000	Tone A	A	Lyon, Osceola, Dickinson, Emmet, Sioux, O'Brien, Clay Palo Alto, Buena Vista, Boone, Story, Dallas, Polk, Jasper, Madison, Warren, Marion
15	Simplex	CMED	EMS	155.4000	Tone D	155.4000	Tone D	A	Muscatine, Scott

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band Description					
				VHF-High (Conventional) Region Name					
Ch	Chan. Config.	Channel or Talkgroup Name	Usage Locale	Mobile Receive		Mobile Transmit		A, D or M	Notes
				Freq.	Tone or NAC	Freq.	Tone or NAC		
16	Simplex	EMS340	EMS	155.3400	CSQ	155.3400	CSQ	A	Iowa State Communications[3]
17	Simplex	IA Fire MA	Fire	154.2800	CSQ	154.2800	CSQ	A	Iowa State Communications[1]
18	Simplex	IA POINT2POINT	Law	155.3700	CSQ	155.3700	CSQ	A	Iowa State Communications
19	Simplex	IOWA CHANNEL	Law	151.4750	CSQ	151.4750	CSQ	A	Iowa State Communications
20	Simplex	LAW AID (VLAW31)	Law	155.4750	CSQ	155.4750	CSQ	A	Iowa State Communications[2]

Radio channel names as listed in this Table are required.
Modes: A=Analog, D=Digital, M=Multimode.

[1] Same as Nationwide Interoperability channel VFIRE21 except CSQ
[2] Same as Nationwide Interoperability channel VLAW31 except CSQ
[3] Same as Nationwide Interoperability channel VMED28 except CSQ
[4] Tone code varies by region

Unless otherwise indicated, all channels in this 217a are:
☒ Narrowband ☐ Wideband

Appendix B-3(b) UHF Band

Table 10: ICS 217a – UHF

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band Description					
				UHF (Conventional) Region Name					
Ch	Chan. Config.	Channel or Talkgroup Name	Usage Locale	Mobile Receive		Mobile Transmit		A, D or M	Notes
				Freq.	Tone or NAC	Freq.	Tone or NAC		
1	No channels identified.								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Radio channel names as listed in this Table are required.
Modes: A=Analog, D=Digital, M=Multimode;

Unless otherwise indicated, all channels in this 217a are:
☐ Narrowband ☐ Wideband

Appendix B-3(c) ICS 217a – 700 MHz

Table 11: ICS 217a – 700 MHz

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band Description		700 MHz (Conventional) Iowa Statewide			
				Mobile Receive		Mobile Transmit			
Ch	Chan. Config.	Channel or Talkgroup Name	Usage Locale	Freq.	Tone or NAC	Freq.	Tone or NAC	A, D or M	Notes
1	Simplex	7ITALK1D		774.93125	$293	774.93125	$F7E	D	TGID $0001
2	Simplex	7ITALK2D		774.95625	$293	774.95625	$F7E	D	TGID $0001
3	Simplex	7ITALK3D		774.98125	$293	774.98125	$F7E	D	TGID $0001
4									
5									
6									
All Agencies									
7									
8									
9									

Radio channel names as listed in this Table are required.
Modes: A=Analog, D=Digital, M=Multimode.
Max ERP 2.5 watts

Unless otherwise indicated, all channels in this 217a are:
☒ Narrowband ☐ Wideband

Appendix B-3(d) ICS 217a – 700/800 MHz Band Trunked

Table 12: ICS 217a – 700/800 MHz Band ISICS Trunked Talkgroups

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A				Frequency Band Description		700 MHz (Trunked) Iowa Statewide	
Ch	Name	TGID	Dec/Hex	System	P25	Encryption Key (if appl)	Notes
1	IACALL1	3001	Dec	ISICS 700/800 TRS	P25-II		Calling (Statewide)
2	IATAC2	3002	Dec	ISICS 700/800 TRS	P25-II		Tac 2 (Statewide)
3	IATAC3	3003	Dec	ISICS 700/800 TRS	P25-II		Tac 3 (Statewide)
4	IATAC4	3004	Dec	ISICS 700/800 TRS	P25-II		Tac 4 (Statewide)
5	IATAC5	3005	Dec	ISICS 700/800 TRS	P25-II		Tac 5 (Statewide)
6	IATAC6	3006	Dec	ISICS 700/800 TRS	P25-II		Tac 6 (Statewide)
7	IATAC7E	3007	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 7 Encrypted (Statewide)
8	IATAC8E	3008	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 8 Encrypted (Statewide)
9	IATAC9E	3009	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 9 Encrypted (Statewide)
10	IAEMTAC	3020	Dec	ISICS 700/800 TRS	P25-II		Tac 20 (Statewide)
11	R1CALL11	13001	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 1)
12	R1TAC12	13002	Dec	ISICS 700/800 TRS	P25-II		Tac 12 (Region 1)
13	R1TAC13	13003	Dec	ISICS 700/800 TRS	P25-II		Tac 13 (Region 1)
14	R1TAC14	13004	Dec	ISICS 700/800 TRS	P25-II		Tac 14 (Region 1)
15	R1TAC15	13005	Dec	ISICS 700/800 TRS	P25-II		Tac 15 (Region 1)

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A					Frequency Band Description	700 MHz (Trunked) Iowa Statewide	
Ch	**Name**	**TGID**	**Dec/Hex**	**System**	**P25**	**Encryption Key (if appl)**	**Notes**
16	R1TAC16	13006	Dec	ISICS 700/800 TRS	P25-II		Tac 16 (Region 1)
17	R1TAC17E	13007	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 17 Encrypted (Region 1)
18	R1TAC18E	13008	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 18 Encrypted (Region 1)
19	R1TAC19E	13009	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 19 Encrypted (Region 1)
20	SR1CALL111	13011	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Call 111
21	SR1TAC112	13012	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Tac 112
22	SR1TAC113	13013	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Tac 113
23	SR1TAC114	13014	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Tac 114
24	SR1TAC115	13015	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Tac 115
25	SR1TAC116	13016	Dec	ISICS 700/800 TRS	P25-II		Sub Regional 1 Tac 116
26	SR1TAC117E	13017	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Sub Regional 1 Tac 117
27	SR1TAC118E	13018	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Sub Regional 1 Tac 118
28	SR1TAC119E	13019	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Sub Regional 1 Tac 119
29	R2CALL21	13601	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 2)
30	R2TAC22	13602	Dec	ISICS 700/800 TRS	P25-II		Tac 22 (Region 2)
31	R2TAC23	13603	Dec	ISICS 700/800 TRS	P25-II		Tac 23 (Region 2)
32	R2TAC24	13604	Dec	ISICS 700/800 TRS	P25-II		Tac 24 (Region 2)
33	R2TAC25	13605	Dec	ISICS 700/800 TRS	P25-II		Tac 25 (Region 2)
34	R2TAC26	13606	Dec	ISICS 700/800 TRS	P25-II		Tac 26 (Region 2)
35	R2TAC27E	13607	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 27 Encrypted (Region 2)
36	R2TAC28E	13608	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 28 Encrypted (Region 2)
37	R2TAC29E	13609	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 29 Encrypted (Region 2)
38	R2EMTAC	13620	Dec	ISICS 700/800 TRS	P25-II		EMTAC (Region 2)
39	R3CALL31	13801	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 3)
40	R3TAC32	13802	Dec	ISICS 700/800 TRS	P25-II		Tac 32 (Region 3)
41	R3TAC33	13803	Dec	ISICS 700/800 TRS	P25-II		Tac 33 (Region 3)
42	R3TAC34	13804	Dec	ISICS 700/800 TRS	P25-II		Tac 34 (Region 3)
43	R3TAC35	13805	Dec	ISICS 700/800 TRS	P25-II		Tac 35 (Region 3)
44	R3AC36	13806	Dec	ISICS 700/800 TRS	P25-II		Tac 36 (Region 3)
45	R3 TAC37E	13807	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 37 Encrypted (Region 3)
46	R3AC38E	13808	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 38 Encrypted (Region 3)
47	R3 TAC39E	13809	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 39 Encrypted (Region 3)
48	R3EMTAC	13820	Dec	ISICS 700/800 TRS	P25-II		EMTAC (Region 3)
49	R4CALL41	14001	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 4)
50	R4TAC42	14002	Dec	ISICS 700/800 TRS	P25-II		Tac 42 (Region 4)
51	R4TAC43	14003	Dec	ISICS 700/800 TRS	P25-II		Tac 43 (Region 4)
52	R4TAC44	14004	Dec	ISICS 700/800 TRS	P25-II		Tac 44 (Region 4)
53	R4TAC45	14005	Dec	ISICS 700/800 TRS	P25-II		Tac 45 (Region 4)
54	R4TAC46	14006	Dec	ISICS 700/800 TRS	P25-II		Tac 46 (Region 4)
55	R4TAC47E	14007	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 47 Encrypted (Region 4)
56	R4TAC48E	14008	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 48 Encrypted (Region 4)

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS Form 217A					Frequency Band Description	700 MHz (Trunked) Iowa Statewide	
Ch	**Name**	**TGID**	**Dec/Hex**	**System**	**P25**	**Encryption Key (if appl)**	**Notes**
57	R4TAC49E	14009	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 49 Encrypted (Region 4)
58	R4EMTAC	14020	Dec	ISICS 700/800 TRS	P25-II		EMTAC (Region 4)
59	R5CALL51	14201	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 5)
60	R5TAC52	14202	Dec	ISICS 700/800 TRS	P25-II		Tac 52 (Region 5)
61	R5TAC53	14203	Dec	ISICS 700/800 TRS	P25-II		Tac 53 (Region 5)
62	R5TAC54	14204	Dec	ISICS 700/800 TRS	P25-II		Tac 54 (Region 5)
63	R5TAC55	14205	Dec	ISICS 700/800 TRS	P25-II		Tac 55 (Region 5)
64	R5TAC56	14206	Dec	ISICS 700/800 TRS	P25-II		Tac 56 (Region 5)
65	R5TAC57E	14207	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 57 Encrypted (Region 5)
66	R5TAC58E	14208	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 58 Encrypted (Region 5)
67	R5TAC59E	14209	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 59 Encrypted (Region 5)
68	R5EMTAC	14220	Dec	ISICS 700/800 TRS	P25-II		EMTAC (Region 5)
69	R6CALL61	14401	Dec	ISICS 700/800 TRS	P25-II		Calling (Region 6)
70	R6TAC62	14402	Dec	ISICS 700/800 TRS	P25-II		Tac 62 (Region 6)
71	R6TAC63	14403	Dec	ISICS 700/800 TRS	P25-II		Tac 63 (Region 6)
72	R6TAC64	14404	Dec	ISICS 700/800 TRS	P25-II		Tac 64 (Region 6)
73	R6TAC65	14405	Dec	ISICS 700/800 TRS	P25-II		Tac 65 (Region 6)
74	R6TAC66	14406	Dec	ISICS 700/800 TRS	P25-II		Tac 66 (Region 6)
75	R6TAC67E	14407	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 67 Encrypted (Region 6)
76	R6TAC68E	14408	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 68 Encrypted (Region 6)
77	R6TAC69E	14409	Dec	ISICS 700/800 TRS	P25-II	SLN 786	Tac 69 Encrypted (Region 6)
78	R6EMTAC	14420	Dec	ISICS 700/800 TRS	P25-II		EMTAC (Region 6)

Appendix C ISICSB Interoperable Radio Channels

These channels are recommended by the Iowa State Interoperable Communications System Board.

Table 13: ISICSB Minimum Interoperable Radio Channels (VHF)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
VCALL10	155.7525	156.7	155.7525	156.7	A		Calling
VTAC11	151.1375	156.7	151.1375	156.7	A		Tactical
VTAC12	154.4525	156.7	154.4525	156.7	A		Tactical
VTAC13	158.7375	156.7	158.7375	156.7	A		Tactical
VTAC14	159.4725	156.7	159.4725	156.7	A		Tactical
For FCC Part 90 licensees, the non-Federal National Interoperability Channels VCALL10-VTAC14, UCALL40- UTAC43, and 8CALL90-8TAC94 are covered by a "blanket authorization" from the FCC - "Public safety licensees… can operate mobile units on these interoperability channels without an individual license." See FCC 00-348, released 10/10/2000, paragraph 90.							

Table 14: ISICSB Minimum Interoperable Radio Channels (UHF)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
UCALL40	453.2125	156.7	458.2125	156.7	A		Calling
UCALL40D	453.2125	156.7	453.2125	156.7	A		Calling Direct
UTAC41	453.4625	156.7	458.4625	156.7	A		Tactical Repeater
UTAC41D	453.4625	156.7	453.4625	156.7	A		Tactical Direct
UTAC42	453.7125	156.7	458.7125	156.7	A		Tactical Repeater
UTAC42D	453.7125	156.7	453.7125	156.7	A		Tactical Direct
UTAC43	453.8625	156.7	458.8625	156.7	A		Tactical Repeater
UTAC43D	453.8625	156.7	453.8625	156.7	A		Tactical Direct
For FCC Part 90 licensees, the non-Federal National Interoperability Channels VCALL10-VTAC14, UCALL40- UTAC43, and 8CALL90-8TAC94 are covered by a "blanket authorization" from the FCC - "Public safety licensees ... can operate mobile units on these interoperability channels without an individual license." See FCC 00-348, released 10/10/2000, paragraph 90.							

Table 15: ISICSB Minimum Interoperable Radio Channels (700 MHz)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
7CALL50	769.24375	$F7E	799.24375 N	$293	D	All Public Safety	Calling
7CALL50D	769.24375	$F7E	769.24375 N	$293	D	All Public Safety	Calling
7TAC51	769.14375	$F7E	799.14375 N	$293	D	All Public Safety	Tactical Repeater
7TAC51D	769.14375	$F7E	769.14375 N	$293	D	All Public Safety	Tactical Direct
7TAC52	769.64375	$F7E	799.64375 N	$293	D	All Public Safety	Tactical Repeater
7TAC52D	769.64375	$F7E	769.64375 N	$293	D	All Public Safety	Tactical Direct
7TAC53	770.14375	$F7E	800.14375 N	$293	D	All Public Safety	Tactical Repeater
7TAC53D	770.14375	$F7E	770.14375 N	$293	D	All Public Safety	Tactical Direct
7TAC54	770.64375	$F7E	800.64375 N	$293	D	All Public Safety	Tactical Repeater
7TAC54D	770.64375	$F7E	770.64375 N	$293	D	All Public Safety	Tactical Direct
7TAC55	769.74375	$F7E	799.74375 N	$293	D	All Public Safety	Tactical Repeater
7TAC55D	769.74375	$F7E	769.74375 N	$293	D	All Public Safety	Tactical Direct

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
A public safety entity meeting the requirements of 47 CFR § 90.523 may operate mobile or portable units on the Interoperability channels in the 769-775 MHz and 799-805 MHz frequency bands without a specific authorization from the Commission provided it holds a part 90 license.							

Table 16: ISICSB Minimum Interoperable Radio Channels (700 MHz Air-to-Ground)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
7AG58	769.13125	$F7E	799.13125	$293	D	Low altitude aircraft and ground-based stations	Air-Ground
7AG58D	769.13125	$F7E	769.13125	$293	D		Air-Ground
7AG60	769.63125	$F7E	799.63125	$293	D		Air-Ground
7AG60D	769.63125	$F7E	769.63125	$293	D		Air-Ground
7AG67	770.13125	$F7E	800.13125	$293	D		Air-Ground
7AG67D	770.13125	$F7E	770.13125	$293	D		Air-Ground
7AG68	770.63125	$F7E	800.63125	$293	D		Air-Ground
7AG68D	770.63125	$F7E	770.63125	$293	D		Landing zone use
7AG78 *	773.11875	$F7E	803.11875	$293	D	Low altitude aircraft and ground-based stations	Air-Ground
7AG78D **	773.11875	$F7E	773.11875	$293	D		Air-Ground
7AG80 ***	773.61875	$F7E	803.61875	$293	D		Air-Ground
7AG80D ****	773.61875	$F7E	773.61875	$293	D		Air-Ground
7AG85	774.11875	$F7E	804.11875	$293	D		Air-Ground
7AG85D	774.11875	$F7E	774.61875	$293	D		Air-Ground
7AG88	744.61875	$F7E	804.61875	$293	D		Air-Ground
7AG88D (LZ)	774.61875	$F7E	774.61875	$293	D		Landing zone use

* See FCC rule 90.531(7).

** Airborne use of these channels is limited to aircraft flying at or below 457 meters (1500 feet) above ground level.

*** Aircraft may transmit on either the mobile or base transmit side of the channel pair.

****Aircraft are limited to 2 watts effective radiated power (ERP) when transmitting while airborne on these channels.

Table 17: ISICSB Minimum Interoperable Radio Channels (800 MHz)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
8CALL90	851.0125	156.7	806.0125	156.7	A		Calling
8CALL90D	851.0125	156.7	851.0125	156.7	A		Calling - Direct
8TAC91	851.5125	156.7	806.5125	156.7	A		Tactical
8TAC91D	851.5125	156.7	851.5125	156.7	A		Tactical - Direct
8TAC92	852.0125	156.7	807.0125	156.7	A		Tactical
8TAC92D	852.0125	156.7	852.0125	156.7	A		Tactical - Direct
8TAC93	852.5125	156.7	807.5125	156.7	A		Tactical
8TAC93D	852.5125	156.7	852.5125	156.7	A		Tactical - Direct
8TAC94	853.0125	156.7	808.0125	156.7	A		Tactical
8TAC94D	853.0125	156.7	853.0125	156.7	A		Tactical - Direct
For FCC Part 90 licensees, the non-Federal National Interoperability Channels VCALL10-VTAC14, UCALL40- UTAC43, and 8CALL90-8TAC94 are covered by a "blanket authorization" from the FCC - "Public safety licensees ... can operate mobile units on these interoperability channels without an individual license." See FCC 00-348, released 10/10/2000, paragraph 90.							

Table 18: ISICSB Minimum Interoperable Radio Channels (VHF)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
VFIRE21	154.2800	156.7	154.2800	156.7	A	Fire	Fire Mutual Aid
VLAW31	155.4750	CSQ	155.4750	156.7	A	Law	LE Mutual Aid
VMED28	155.3400	CSQ	155.3400	156.7	A	Med	EMS Mutual Aid
WARNING: These frequencies are NOT covered by the blanket authorization for nationwide interoperability channels. A valid FCC license for these frequencies is required. Availability subject to other licensed users in the same area.							

Table 19: ISICSB Minimum Interoperable Radio Channels (Point to Point)

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
Point to Point	155.3700	DCS 271	155.3700	DCS 271	A		
Communications Centers							

Table 20: ISICSB Licensed Frequencies

Channel Name	Mob RX/Base TX		Mob TX/Base RX		Mode	Used By	Usage
	Freq	Tone	Freq	Tone			
7ITALK1D	774.93125	$F7E	774.93125 N	$293	D		
7ITALK2D	774.95625	$F7E	774.95625 N	$293	D		
7ITALK3D	774.98125	$F7E	774.98125 N	$293	D		
These frequencies are licensed by ISICSB and authorizes operation by any public safety agency possessing an FCC Part 90 license.							

Appendix D National Interoperability Channels

The FCC has set aside channels in each frequency band for the purposes of providing interoperable communications. These channels are listed in the tables below.

All frequency listings for repeated channels are shown as they would be programmed for a subscriber radio. Repeaters would be programmed in the opposite way.

Table 21: Nationwide Interoperability Channels (VHF-Low)

VHF NATIONAL INTEROPERABILITY CHANNELS LOW BAND – LLAW & LFIRE					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Law Enforcement	LLAW1	39.460	156.7	45.860	156.7
Law Enforcement	LLAW1D	39.460	156.7	39.460	156.7
Fire *	LFIRE2	39.480	156.7	45.880	156.7
Fire *	LFIRE2D	39.480	156.7	39.480	156.7
Law Enforcement	LLAW3	45.860	156.7	39.460	156.7
Law Enforcement	LLAW3D	45.860	156.7	45.860	156.7
Fire *	LFIRE4	45.880	156.7	39.480	156.7
Fire	LFIRE4D	45.880	156.7	45.880	156.7
*Proposed for use. Frequency 39.48 is pending FCC assignment for exclusive fire intersystem use.					
Use emission – 16K0F3E (5 KHz deviation wideband analog FM)					

Table 22: Nationwide Interoperability Channels (VHF-High)

VHF NATIONAL INTEROPERABILITY CHANNELS VHF TACTICAL SIMPLEX – VCALL & VTAC					
CAUTION: Ensure coordination between VTAC simplex and repeater operations. These frequencies are used to create the tactical repeater channels listed for VTAC33-38.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling	VCALL10	155.7525	156.7	155.7525	156.7
Tactical*	VTAC11	151.1375	156.7	151.1375	156.7
Tactical*	VTAC12	154.4525	156.7	154.4525	156.7
Tactical	VTAC13	158.7375	156.7	158.7375	156.7
Tactical	VTAC14	159.4725	156.7	159.4725	156.7

- Authorized emission – 11K0F3E (2.5 KHz deviation narrowband analog FM) – 47 CFR §90.20(d)(80)
- Encryption may not be used – 47 CFR §90.20(i)
- Limited to 3 watts ERP North of Line A or East of Line C.
- VCALL10, VTAC11-14 utilize a 156.7 Hz CTCSS Mobile TX tone which differs from the VTAC33-38 Tactical Repeater Channels which utilize a 136.5 CTCSS Mobile TX tone.

* VTAC11-12 may not be used in Puerto Rico or the US Virgin Islands

VHF NATIONWIDE INTEROPERABILITY CHANNELS
VHF TACTICAL REPEATER – VTAC

CAUTION: Ensure coordination between VTAC simplex and repeater operations. These frequencies are created by utilizing the frequencies listed for VTAC11-14.

Assignment	Channel Name	Mob. RX Freq. (MHz)	Mobile RX CTCSS/NAC	Mob. TX Free. (MHz)	Mobile TX CTCSS/NAC
Tac Rptr (VTAC 14/11)	VTAC33*	159.4725	156.7	151.1375	136.5
Tac Rptr (VTAC 13/12)	VTAC34*	158.7375	156.7	154.4525	136.5
Tac Rptr (VTAC 14/13)	VTAC35	159.4725	156.7	158.7375	136.5
Tac Rptr (VTAC 11/14)	VTAC36*	151.1375	156.7	159.4725	136.5
Tac Rptr (VTAC 12/13)	VTAC37*	154.4525	156.7	158.7375	136.5
Tac Rptr (VTAC 13/14)	VTAC38	158.7375	156.7	159.4725	136.5

- Authorized emission – 11K0F3E (2.5 KHz deviation narrowband analog FM) – 47 CFR §90.20(d)(80)
- Encryption may not be used – 47 CFR §90.20(i)
- Limited to 3 watts ERP North of Line A or East of Line C.
- VTAC33-38 utilize a 136.5 CTCSS Mobile TX tone which differs from the VTAC11-14 Simplex Channels which utilize a 156.7 CTCSS Mobile TX tone.
- VTAC33-35 are the reverse of VTAC 36-38 to allow for mitigation of any potential co-site interference.
- VTAC36-38 are preferred; VTAC33-35 should be used only when necessary due to interference.

* VTAC33-34, and VTAC 36-37 may not be used in Puerto Rico or the US Virgin Islands

VHF NATIONWIDE INTEROPERABILITY CHANNELS
VHF INLAND – VTAC17

LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Use of these channels must be licensed or authorized by STA.

Assignment	Channel Name	Mob. RX Freq. (MHz)	Mobile RX CTCSS/NAC	Mob. TX Free. (MHz)	Mobile TX CTCSS/NAC
Tactical	VTAC17	161.8500	156.7	157.2500	156.7
Tactical	VTAC17D	161.8500	156.7	161.8500	156.7

- For VTAC17/VTAC17D only: Base stations: 50 watts max, antenna HAAT 400 feet max. Mobile stations: 20 watts max, antenna HAAT 15 feet max. These channels are for tactical use and may not be operated on board aircraft in flight. These channels use 2.5 kHz deviation narrowband Analog FM and are available only in certain inland areas at least 100 miles from a major waterway. These channels use the same frequencies as VHF Marine channel 25, which uses 5 kHz deviation wideband Analog FM. Use only where authorized. See map on next page. In these authorized areas, interoperability communications have priority over grandfathered public coast and public safety licensees. See 47 CFR §90.20(g)(3).
- Authorized emission – 11K0F3E (2.5 KHz deviation narrowband analog FM) – 47 CFR §90.20(d)(80)
- Limited to 3 watts ERP North of Line A or East of Line C.

Table 23: Nationwide Mutual Aid and Common Channels (VHF-High)

VHF PUBLIC SAFETY MUTUAL AID AND COMMON CHANNELS					
• ***LICENSING REQUIRED:*** These frequencies are **NOT** covered by the "Blanket Authorization" for nationwide interoperability channels. Use of these channels must be licensed or authorized by STA. Availability subject to other licensed users in the same area.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
SAR Common*	VSAR16	155.1600	127.3	155.1600	127.3
Fire Mutual Aid *(Not available in Puerto Rico and the US Virgin Islands)*	VFIRE21	154.2800		154.2800	
	VFIRE22	154.2650		154.2650	
	VFIRE23	154.2950		154.2950	
	VFIRE24	154.2725		154.2725	
	VFIRE25	154.2875		154.2875	
	VFIRE26	154.3025		154.3025	
EMS Mutual Aid	VMED28	155.3400	CSQ	155.3400	156.7
	VMED29	155.3475		155.3475	
Law Enforcement Mutual Aid	VLAW31	155.4750		155.4750	
	VLAW32	155.4825		155.4825	
CTCSS tones vary by jurisdiction. Rules for use of these channels are contained in 47 CFR 90.20. EXCEPT for VSAR16, the recommended CTCSS tones are 156.7 receive and transmit for all channels on this page for interoperability; local use may specify other tones.					

Table 24: VHF Marine Channels

VHF MARINE CHANNELS*			
Channel	**Usage**	**Mob. RX & TX**	
		Freq. (MHz)	**CTCSS/NAC**
16	International Distress, Safety and Calling	156.8000	CSQ
17	State & local govt maritime control	156.8500	CSQ
21A	U.S. Coast Guard assigned	157.0500	CSQ
23A	U.S. Coast Guard assigned	157.1500	CSQ
81A	Environmental protection ops or as assigned	157.0750	CSQ
83A	U.S. Coast Guard assigned	157.1750	CSQ
· Use VHF Marine channel 16 to make contact (30 seconds max), then move to the appropriate working channel as directed by the local USCG Sector Commander. Non-maritime use of any VHF Maritime channel requires FCC Special Temporary Authority or appropriate license. VHF marine channels use wideband FM. Emission 16K00F3E.			
Direction from USCG, FCC, or FAA overrides information in this table. This table does not convey authority to operate.			

Table 25: Nationwide Interoperability Channels (UHF Band)

UHF NATIONWIDE INTEROPERABILITY CHANNELS UCALL & UTAC					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling	UCALL40	453.2125	156.7	458.2125	156.7
Calling Direct	UCALL40D	453.2125	156.7	453.2125	156.7
Tactical Repeater	UTAC41	453.4625	156.7	458.4625	156.7
Tactical Direct	UTAC41D	453.4625	156.7	453.4625	156.7
Tactical Repeater	UTAC42	453.7125	156.7	458.7125	156.7
Tactical Direct	UTAC42D	453.7125	156.7	453.7125	156.7
Tactical Repeater	UTAC43	453.8625	156.7	458.8625	156.7
Tactical Direct	UTAC43D	453.8625	156.7	453.8625	156.7
• Authorized emission – 11K0F3E (2.5 KHz deviation narrowband analog FM) – 47 CFR §90.20(d)(80) • Encryption may not be used – 47 CFR §90.20(i) • Limited to 3 watts ERP North of Line A or East of Line C.					

Table 26: National UHF MED Channels

UHF MEDICAL (MED, EMS) CHANNELS					
LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Availability subject to other licensed users in the same area.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Freq. (MHz)**	**Mobile TX CTCSS/NAC**
Dispatch*	MED-9	462.9500	156.7 See Notes	467.9500	See Notes
	MED-9D	462.9500	156.7 See Notes	462.9500	" "
Dispatch*	MED-92	462.9625	156.7 See Notes	467.9625	" "
	MED-92D	462.9625	156.7 See Notes	462.9625	" "
Dispatch*	MED-10	462.9750	156.7 See Notes	467.9750	" "
	MED-10D	462.9750	156.7 See Notes	462.9750	" "
Dispatch*	MED-102	462.9875	156.7 See Notes	467.9875	" "
	MED-102D	462.9875	156.7 See Notes	462.9875	" "
Medical	MED-1	463.0000	156.7 See Notes	468.0000	" "
Medical (Direct)	MED-1D	463.0000	156.7 See Notes	463.0000	" "
Medical	MED-12	463.0125	156.7 See Notes	468.0125	" "
Medical (Direct)	MED-12D	463.0125	156.7 See Notes	463.0125	" "
Medical	MED-2	463.0250	156.7 See Notes	468.0250	" "
Medical (Direct)	MED-2D	463.0250	156.7 See Notes	463.0250	" "

UHF MEDICAL (MED, EMS) CHANNELS

LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Availability subject to other licensed users in the same area.

Assignment	Channel Name	Mob. RX Freq. (MHz)	Mobile RX CTCSS/NAC	Mob. TX Freq. (MHz)	Mobile TX CTCSS/NAC
Medical	MED-22	463.0375	156.7 See Notes	468.0375	" "
Medical (Direct)	MED-22D	463.0375	156.7 See Notes	463.0375	" "
Medical	MED-3	463.0500	156.7 See Notes	468.0500	" "
Medical (Direct)	MED-3D	463.0500	156.7 See Notes	463.0500	" "
Medical	MED-32	463.0625	156.7 See Notes	468.0625	" "
Medical (Direct)	MED-32D	463.0625	156.7 See Notes	463.0625	" "
Medical	MED-4	463.0750	156.7 See Notes	468.0750	" "
Medical (Direct)	MED-4D	463.0750	156.7 See Notes	463.0750	" "
Medical	MED-42	463.0875	156.7 See Notes	468.0875	" "
Medical (Direct)	MED-42D	463.0875	156.7 See Notes	463.0875	" "
Medical	MED-5	463.1000	156.7 See Notes	468.1000	" "
Medical (Direct)	MED-5D	463.1000	156.7 See Notes	463.1000	" "
Medical	MED-52	463.1125	156.7 See Notes	468.1125	" "
Medical (Direct)	MED-52D	463.1125	156.7 See Notes	463.1125	" "
Medical	MED-6	463.1250	156.7 See Notes	468.1250	" "
Medical (Direct)	MED-6D	463.1250	156.7 See Notes	463.1250	" "
Medical	MED-62	463.1375	156.7 See Notes	468.1375	" "
Medical (Direct)	MED-62D	463.1375	156.7 See Notes	463.1375	" "
Medical	MED-7	463.1500	156.7 See Notes	468.1500	" "
Medical (Direct)	MED-7D	463.1500	156.7 See Notes	463.1500	" "
Medical	MED-72	463.1625	156.7 See Notes	468.1625	" "
Medical (Direct)	MED-72D	463.1625	156.7 See Notes	463.1625	" "
Medical	MED-8	463.1750	156.7 See Notes	468.1750	" "
Medical (Direct)	MED-8D	463.1750	156.7 See Notes	463.1750	" "
Medical	MED-82	463.1875	156.7 See Notes	468.1875	" "

UHF MEDICAL (MED, EMS) CHANNELS					
LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Availability subject to other licensed users in the same area.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Freq. (MHz)**	**Mobile TX CTCSS/NAC**
Medical (Direct)	MED-82D	463.1875	156.7 See Notes	463.1875	" "
* Used primarily for dispatch; may be used for mutual aid. 47CFR90.20(d)(65). • Recommended CTCSS tones are 156.7 Hz receive and transmit for all channels on this page for interoperability; local use may specify other CTCSS tones as required by local plan.					

Table 27: Nationwide Interoperability Channels (700 MHz)

700 MHZ NATIONWIDE INTEROPERABILITY CHANNELS					
TX NAC: $293 ($659_{10})		**RX NAC $F7E ($3966_{10}).**		**Default Talk Group ID: $0001 ($1_{10})**	
"$" INDICATES HEXADECIMAL VALUE, "$_{10}$" SUBSCRIPT INDICATES DECIMAL VALUE.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling Channel *	7CALL50	769.24375	$F7E	799.24375	$293
Calling Channel *	7CALL50D	769.24375	$F7E	769.24375	$293
General Public Safety	7TAC51	769.14375	$F7E	799.14375	$293
General Public Safety	7TAC51D	769.14375	$F7E	769.14375	$293
General Public Safety	7TAC52	769.64375	$F7E	799.64375	$293
General Public Safety	7TAC52D	769.64375	$F7E	769.64375	$293
General Public Safety	7TAC53	770.14375	$F7E	800.14375	$293
General Public Safety	7TAC53D	770.14375	$F7E	770.14375	$293
General Public Safety	7TAC54	770.64375	$F7E	800.64375	$293
General Public Safety	7TAC54D	770.64375	$F7E	770.64375	$293
General Public Safety	7TAC55	769.74375	$F7E	799.74375	$293
General Public Safety	7TAC55D	769.74375	$F7E	769.74375	$293
General Public Safety	7TAC56	770.24375	$F7E	800.24375	$293
General Public Safety	7TAC56D	770.24375	$F7E	770.24375	$293
Other Public Safety	7GTAC57	770.99375	$F7E	800.99375	$293
Other Public Safety	7GTAC57D	770.99375	$F7E	770.99375	$293
Mobile Repeater	7MOB59	770.89375	$F7E	800.89375	$293
Mobile Repeater	7MOB59D	770.89375	$F7E	770.89375	$293
Law Enforcement	7LAW61	770.39375	$F7E	800.39375	$293
Law Enforcement	7LAW61D	770.39375	$F7E	770.39375	$293
Law Enforcement	7LAW62	770.49375	$F7E	800.49375	$293
Law Enforcement	7LAW62D	770.49375	$F7E	770.49375	$293
Fire	7FIRE63	769.89375	$F7E	799.89375	$293
Fire	7FIRE63D	769.89375	$F7E	769.89375	$293
Fire	7FIRE64	769.99375	$F7E	799.99375	$293
Fire	7FIRE64D	769.99375	$F7E	769.99375	$293
EMS	7MED65	769.39375	$F7E	799.39375	$293
EMS	7MED65D	769.39375	$F7E	769.39375	$293
EMS	7MED66	769.49375	$F7E	799.49375	$293
EMS	7MED66D	769.49375	$F7E	769.49375	$293
Mobile Data ***	7DATA69	770.74375	$F7E	800.74375	$293
Mobile Data ***	7DATA69D	770.74375	$F7E	770.74375	$293
Calling Channel **	7CALL70	773.25625	$F7E	803.25625	$293
Calling Channel **	7CALL70D	773.25625	$F7E	773.25625	$293

700 MHZ NATIONWIDE INTEROPERABILITY CHANNELS					
TX NAC: $293 ($659_{10}$)	RX NAC $F7E ($3966_{10}$).		Default Talk Group ID: $0001 ($1_{10}$)		
"$" INDICATES HEXADECIMAL VALUE, "$_{10}$" SUBSCRIPT INDICATES DECIMAL VALUE.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
General Public Safety	7TAC71	773.10625	$F7E	803.10625	$293
General Public Safety	7TAC71D	773.10625	$F7E	773.10625	$293
General Public Safety	7TAC72	773.60625	$F7E	803.60625	$293
General Public Safety	7TAC72D	773.60625	$F7E	773.60625	$293
General Public Safety	7TAC73	774.10625	$F7E	804.10625	$293
General Public Safety	7TAC73D	774.10625	$F7E	774.10625	$293
General Public Safety	7TAC74	774.60625	$F7E	804.60625	$293
General Public Safety	7TAC74D	774.60625	$F7E	774.60625	$293
General Public Safety	7TAC75	773.75625	$F7E	803.75625	$293
General Public Safety	7TAC75D	773.75625	$F7E	773.75625	$293
General Public Safety	7TAC76	774.25625	$F7E	804.25625	$293
General Public Safety	7TAC76D	774.25625	$F7E	774.25625	$293
Other Public Safety	7GTAC77	774.85625	$F7E	804.85625	$293
Other Public Safety	7GTAC77D	774.85625	$F7E	774.85625	$293
Mobile Repeater	7MOB79	774.50625	$F7E	804.50625	$293
Mobile Repeater	7MOB79D	774.50625	$F7E	774.50625	$293
Law Enforcement	7LAW81	774.00625	$F7E	804.00625	$293
Law Enforcement	7LAW81D	774.00625	$F7E	774.00625	$293
Law Enforcement	7LAW82	774.35625	$F7E	804.35625	$293
Law Enforcement	7LAW82D	774.35625	$F7E	774.35625	$293
Fire	7FIRE83	773.50625	$F7E	803.50625	$293
Fire	7FIRE83D	773.50625	$F7E	773.50625	$293
Fire	7FIRE84	773.85625	$F7E	803.85625	$293
Fire	7FIRE84D	773.85625	$F7E	773.85625	$293
EMS	7MED86	773.00625	$F7E	803.00625	$293
EMS	7MED86D	773.00625	$F7E	773.00625	$293
EMS	7MED87	773.35625	$F7E	803.35625	$293
EMS	7MED87D	773.35625	$F7E	773.35625	$293
Mobile Data ***	7DATA89	774.75625	$F7E	804.75625	$293
Mobile Data ***	7DATA89D	774.75625	$F7E	774.75625	$293

- Authorized emission – 8K10F1E (Digital P25 Phase I Modulation) – 47 CFR §90.548(a)(1).
- Utilize normal squelch in programming which will use the default talkgroup - $0001 (110).
- AES Encryption permitted on all but the two nationwide interoperability calling channel. Must have accessible switch or other readily accessible control that permits the radio user to disable encryption. 47 CFR §90.553.

* Recommended as PRIMARY calling channel for 700 MHz Band.
**Recommended as SECONDARY calling channel for 700 MHz Band.
*** Voice communications are permitted on 7DATA89 / 7DATA869D on a secondary basis – 90.531(b)(1)(i).

Table 28: National Air-Ground Channels (700 MHz)

700 MHZ NATIONWIDE AIR-GROUND CHANNELS					
LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Use of these channels must be licensed or authorized by STA.					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Air – Ground	7AG58	769.13125	$F7E	799.13125	$293
Air – Ground	7AG58D	769.13125	$F7E	769.13125	$293
Air – Ground	7AG60	769.63125	$F7E	799.63125	$293
Air – Ground	7AG60D	769.63125	$F7E	769.63125	$293
Air – Ground	7AG67	770.13125	$F7E	800.13125	$293
Air – Ground	7AG67D	770.13125	$F7E	770.13125	$293
Air – Ground	7AG68	770.63125	$F7E	800.63125	$293
Air – Ground	7AG68D	770.63125	$F7E	770.63125	$293
Air – Ground	7AG58	769.13125	$F7E	799.13125	$293
Air – Ground	7AG58D	769.13125	$F7E	769.13125	$293
Air – Ground	7AG60	769.63125	$F7E	799.63125	$293
Air – Ground	7AG60D	769.63125	$F7E	769.63125	$293
Air – Ground	7AG78	773.11875	$F7E	803.11875	$293
Air – Ground	7AG78D	773.11875	$F7E	773.11875	$293
Air – Ground	7AG80	773.61875	$F7E	803.61875	$293
Air – Ground	7AG80D	773.61875	$F7E	773.61875	$293
Air – Ground	7AG85	774.11875	$F7E	804.11875	$293
Air – Ground	7AG85D	774.11875	$F7E	774.11875	$293
Air – Ground	7AG88	774.61875	$F7E	804.61875	$293
Air – Ground (LZ)*	7AG88D	774.61875	$F7E	774.61875	$293

*7AG88D is recommended for Landing Zone Use

- TX NAC: $293 (65910). RX NAC $F7E (396610). These channels are reserved for air-ground communications to be used by low-altitude aircraft and ground-based stations: See FCC rule 90.531(7). (i) Airborne use of these channels is limited to aircraft flying at or below 457 meters (1500 feet) above ground level. (ii) Aircraft are limited to 2 watts effective radiated power (ERP) when transmitting while airborne on these channels. (iii) Aircraft may transmit on either the mobile or base transmit side of the channel pair. (iv) States are responsible for the administration of these channels.
- Utilize normal squelch in programming which will use the default talkgroup - $0001 (110).

Table 29: 700 MHz Low Power Itinerant Channels

700 MHZ LOW POWER ITINERANT CHANNELS					
LICENSING REQUIRED: These frequencies are NOT covered by the "Blanket Authorization" for nationwide interoperability channels. Use of these channels must be licensed or authorized by STA.					
Assignment	**Channel Name**	**Mobile RX**	**Mobile RX CTCSS/NAC**	**Mobile TX**	**Mobile TX CTCSS/NAC**
Low Power - PS	7-US-01	769.05625	156.7 / $F7E	799.05625	156.7 / $293
Low Power - PS	7-US-01D	769.05625	156.7 / $F7E	769.05625	156.7 / $293
Low Power - PS	7-US-02	769.06875	156.7 / $F7E	799.06875	156.7 / $293
Low Power - PS	7-US-02D	769.06875	156.7 / $F7E	769.06875	156.7 / $293
Low Power - PS	7-US-03	774.99375	156.7 / $F7E	804.99375	156.7 / $293
Low Power - PS	7-US-03D	774.99375	156.7 / $F7E	774.99375	156.7 / $293
LICENSING NOTES: These Channels may be licensed for national itinerant mobile use as station class MOI. These channels may be used in either Analog or Digital mode and are limited to 2 watts (ERP). · Licensees are responsible for the administration of these channels. · Utilize normal squelch in programming which will use the default talkgroup - $0001 ($1_{10}$).					

Table 30: 700 MHz Nationwide Deployable Trunked System Channels

700 MHZ NATIONWIDE DEPLOYABLE TRUNKED SYSTEM CHANNELS					
LICENSING REQUIRED: These frequencies are **NOT** covered by the "blanket authorization" for nationwide interoperability channels. Use of these channels must be licensed or authorized by STA.					
Common Nationwide System ID: $101 ($257_{10}$)			**Common Nationwide WACN: $BF7CC**		
"$" indicates hexadecimal value, "$_{10}$" subscript indicates decimal value.					
Assignment	**Channel Name**	**Mobile RX**	**Mobile RX CTCSS/NAC**	**Mobile TX**	**Mobile TX CTCSS/NAC**
	A	769.23125	----------	799.23125	----------
	B	769.38125	----------	799.38125	----------
	C*	769.73125	----------	799.73125	----------
	D*	769.88125	----------	799.88125	----------
Primary Control Channel	E	774.51875	----------	804.51875	----------
Secondary Control Channel	F	774.86875	----------	804.86875	----------
*Not available for use above the A-Line in Pennsylvania, New York, and Vermont. · NRPC is the curator of the common nationwide system keys. To apply for system keys, contact the NRPC: nrpc.us. · Additional working channels separate from this list can be allocated locally to deployable systems subject to individual RPC approval. · Each deployable trunk system should coordinate their unique NAC Code with the NRPC.					

Table 31: 700 MHz Nationwide Deployable Trunked System Talkgroups

700 MHZ NATIONWIDE DEPLOYABLE TRUNKED SYSTEM TALKGROUPS				
Recommended Talkgroups - Zone "YY Deploy" – System ID $101				
Position	**Channel Name**	**Eligible Users/Usage**	**Talkgroup ID (Dec)**	**Talkgroup ID (Hex)**
1	CALL YY	Calling / Initial Contact TG	201	$C9
2	CMD YY	Pre-designated Command TG	202	$CA
3	TAC YY3	General / Tactical Use TG	203	$CB
4	TAC YY4	General / Tactical Use TG	204	$CC
5	TAC YY5	General / Tactical Use TG	205	$CD
6	TAC YY6	General / Tactical Use TG	206	$CE
7	TAC YY7	General / Tactical Use TG	207	$CF
8	TAC YY8	General / Tactical Use TG	208	$D0
9	TAC YY9	General / Tactical Use TG	209	$D1
10	TAC YY10	General / Tactical Use TG	210	$D2
11	TAC YY11	General / Tactical Use TG	211	$D3
12	TAC YY12	General / Tactical Use TG	212	$D4
13	TAC YY13	General / Tactical Use TG	213	$D5
14	TAC YY14	General / Tactical Use TG	214	$D6
15	TAC YY15	General / Tactical Use TG	215	$D7
16	EMER YY	EMERGENCY USE TG	216	$D8
Common Nationwide System ID: $101 ($257_{10}$)			Common Nationwide WACN: $BF7CC	
"$" indicates hexadecimal value, "$_{10}$" subscript indicates decimal value.				

- Each deployable trunk system should coordinate their unique NAC Code with the NRPC.
- Duplicate unit IDs with deployable trunked radio systems are a possibility. Subscriber programming resources may be needed to mitigate duplicate ID's.

700 MHZ NATIONWIDE DEPLOYABLE TRUNKED SYSTEM TALKGROUPS				
Recommended Talkgroups - Zone "ZZ Deploy" – System ID $101				
Position	**Channel Name**	**Eligible Users/Usage**	**Talkgroup ID (Dec)**	**Talkgroup ID (Hex)**
1	CALL ZZ	Calling / Initial Contact TG	101	$65
2	CMD ZZ	Pre-designated Command TG	102	$66
3	TAC ZZ3	General / Tactical Use TG	103	$67
4	TAC ZZ4	General / Tactical Use TG	104	$68
5	TAC ZZ5	General / Tactical Use TG	105	$69
6	TAC ZZ6	General / Tactical Use TG	106	$6A
7	TAC ZZ7	General / Tactical Use TG	107	$6B
8	TAC ZZ8	General / Tactical Use TG	108	$6C
9	TAC ZZ9	General / Tactical Use TG	109	$6D
10	TAC ZZ10	General / Tactical Use TG	110	$6E
11	TAC ZZ11	General / Tactical Use TG	111	$6F
12	TAC ZZ12	General / Tactical Use TG	112	$70
13	TAC ZZ13	General / Tactical Use TG	113	$71
14	TAC ZZ14	General / Tactical Use TG	114	$72
15	TAC ZZ15	General / Tactical Use TG	115	$73
16	EMER ZZ	EMERGENCY USE TG	116	$74
Common Nationwide System ID: $101 ($257_{10}$)			Common Nationwide WACN: $BF7CC	
"$" indicates hexadecimal value, "$_{10}$" subscript indicates decimal value.				

- Each deployable trunk system should coordinate their unique NAC Code with the NRPC.
- Duplicate unit IDs with deployable trunked radio systems are a possibility. Subscriber programming resources may be needed to mitigate duplicate IDs.

Table 32: P25 Digital Codes

P25 DIGITAL CODES	
NAC – Network Access Codes	
$293 (65910)	**Default NAC.**
$F7E (396610)	**Receiver will un-squelch with any incoming NAC.**
$F7F (396710)	**A repeater with this NAC will allow incoming signals to be repeated with the NAC intact.**
TGID – Talkgroup ID	
$0001 (110)	**Default TGID, should be used in systems where no other talkgroups are defined.**
$0000 (010)	**No-one or a talkgroup with no users – used for individual call.**
$FFFF (6553510)	**Reserved as a talkgroup which includes everyone.**
UID – Unit ID	
$000000	**No-one. This value is never assigned to a radio unit**
$000001-$98767F	**For general use.**
$989680-$FFFFFE	**For talk group use or other special purposes.**
$FFFFFF	**Designates everyone – used when implementing a group call with a TGID**
Note: Project 25 System Administrators should be aware of possible Unit ID conflicts when conducting operations with neighboring jurisdictions. System administrators should coordinate Unit IDs with agencies likely to operate on their system(s) to address any radio Unit ID conflicts. "$" indicates hexadecimal values, "10" subscript indicates decimal value.	

Table 33: Nationwide Interoperability Channels (800 MHz)

800 MHZ NATIONWIDE INTEROPERABILITY CHANNELS					
Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling	8CALL90	851.0125	156.7	806.0125	156.7
Calling Direct	8CALL90D	851.0125	156.7	851.0125	156.7
Tactical Repeater	8TAC91	851.5125	156.7	806.5125	156.7
Tactical Direct	8TAC91D	851.5125	156.7	851.5125	156.7
Tactical Repeater	8TAC92	852.0125	156.7	807.0125	156.7
Tactical Direct	8TAC92D	852.0125	156.7	852.0125	156.7
Tactical Repeater	8TAC93	852.5125	156.7	807.5125	156.7
Tactical Direct	8TAC93D	852.5125	156.7	852.5125	156.7
Tactical Repeater	8TAC94	853.0125	156.7	808.0125	156.7
Tactical Direct	8TAC94D	853.0125	156.7	853.0125	156.7

- Recommended authorized emission – 14K0F3E (4.0 kHz deviation NPSPAC analog FM) – 47 CFR §90.617(a)(1) and 47 CFR. §90.619(a)(5)(i). The FCC rules allow 5 KHz deviation for the 8CALL / 8TAC interoperability channels - 47 CFR §90.209(b)(5). Some Regional Planning Committees (RPCs) may limit their region to 4KHz.
- Encryption may not be used – 47 CFR §90.20(i).

Appendix E Federal Interoperability Channel Plan

Appendix E-1 Federal Interoperability Channels for Incident Response

Table 34: Federal VHF Incident Response Channels

VHF INCIDENT RESPONSE (IR) FEDERAL INTEROPERABILITY CHANNELS					
LICENSING REQUIRED: These frequencies are **NOT** covered by the "Blanket Authorization" for nationwide interoperability channels. **For Interoperability with Federal Stations Only.**					
Suggested Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Incident Calling	NC 1	169.5375	CSQ	164.7125	167.9
Incident Command	IR 1	170.0125	CSQ	165.2500	167.9
Medical Evac. (Direct)	IR 2	170.4125	CSQ	165.9625	167.9
Logistics Control	IR 3	170.6875	CSQ	166.5750	167.9
Interagency Convoy	IR 4	173.0375	CSQ	167.3250	167.9
Incident Calling (Direct)	IR 5	169.5375	CSQ	169.5375	167.9
Incident Command (Direct)	IR 6	170.0125	CSQ	170.0125	167.9
Medical Evacuation	IR 7	170.4125	CSQ	170.4125	167.9
Logistics Control (Direct)	IR 8	170.6875	CSQ	170.6875	167.9
Interagency Convoy (Direct)	IR 9	173.0375	CSQ	173.0375	167.9
▪ See "Conditions for Use of Federal Interoperability Channels" on pages 19-22 (NIFOG). ▪ Default operation should be carrier squelch receive; CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.					

Table 35: Federal UHF Incident Response Channels

UHF INCIDENT RESPONSE (IR) FEDERAL INTEROPERABILITY CHANNELS					
LICENSING REQUIRED: These frequencies are **NOT** covered by the "Blanket Authorization" for nationwide interoperability channels. **For Interoperability with Federal Stations Only.**					
Suggested Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Incident Calling	NC 2	410.2375	CSQ	419.2375	167.9
Ad hoc Assignment	IR 10	410.4375	CSQ	419.4375	167.9
Ad hoc Assignment	IR 11	410.6375	CSQ	419.6375	167.9
SAR Incident Command	IR 12	410.8375	CSQ	419.8375	167.9
Ad hoc Assignment	IR 13	413.1875	CSQ	413.1875	167.9
Interagency Convoy	IR 14	413.2125	CSQ	413.2125	167.9
Incident Calling (Direct)	IR 15	410.2375	CSQ	410.2375	167.9
Ad hoc (Direct for IR 10)	IR 16	410.4375	CSQ	410.4375	167.9
Ad hoc (Direct for IR 11)	IR 17	410.6375	CSQ	410.6375	167.9
SAR Inc. Command (Direct)	IR 18	410.8375	CSQ	410.8375	167.9
▪ See "Conditions for Use of Federal Interoperability Channels" on pages 19-22 (NIFOG). ▪ Default operation should be carrier squelch receive; CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.					

Appendix E-2 Federal Interoperability Channels for Law Enforcement

Table 36: Federal VHF Law Enforcement (LE) Channels

VHF LAW ENFORCEMENT (LE) FEDERAL INTEROPERABILITY CHANNELS					
LICENSING REQUIRED: These frequencies are **NOT** covered by the "Blanket Authorization" for nationwide interoperability channels. **For Interoperability with Federal Stations Only.**					
Suggested Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling (Analog)	LE A	167.0875	CSQ	167.0875	167.9
Tactical (Analog)	LE 1	167.0875	CSQ	162.0875	167.9
Tactical	LE 2	167.2500	$68F	162.2625	$68F
Tactical	LE 3	167.7500	$68F	162.8375	$68F
Tactical	LE 4	168.1125	$68F	163.2875	$68F
Tactical	LE 5	168.4625	$68F	163.4250	$68F
Tactical (Direct for LE2)	LE 6	167.2500	$68F	167.2500	$68F
Tactical (Direct for LE3)	LE 7	167.7500	$68F	167.7500	$68F
Tactical (Direct for LE4)	LE 8	168.1125	$68F	168.1125	$68F
Tactical (Direct for LE5)	LE 9	168.4625	$68F	168.4625	$68F
· See "Conditions for Use of Federal Interoperability Channels" on pages 19-22 (NIFOG). · CTCSS on receive only if user selectable; else CSQ. · "$" indicates hexadecimal value.					

Table 37: Federal UHF Law Enforcement (LE) Channels

UHF LAW ENFORCEMENT (LE) FEDERAL INTEROPERABILITY CHANNELS					
LICENSING REQUIRED: These frequencies are **NOT** covered by the "Blanket Authorization" for nationwide interoperability channels. **For Interoperability with Federal Stations Only.**					
Suggested Assignment	**Channel Name**	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
Calling (Analog)	LE B	414.0375	CSQ	414.0375	167.9
Tactical (Analog)	LE 10	409.9875	CSQ	418.9875	167.9
Tactical	LE 11	410.1875	$68F	419.1875	$68F
Tactical	LE 12	410.6125	$68F	419.6125	$68F
Tactical	LE 13	414.0625	$68F	414.0625	$68F
Tactical	LE 14	414.3125	$68F	414.3125	$68F
Tactical	LE 15	414.3375	$68F	414.3375	$68F
Tactical (Direct for LE 10)	LE 16	409.9875	CSQ	409.9875	167.9
Tactical (Direct for LE 11)	LE 17	410.1875	$68F	410.1875	$68F
Tactical (Direct for LE 12)	LE 18	410.6125	$68F	410.6125	$68F
· See "Conditions for Use of Federal Interoperability Channels" on pages 19-22 (NIFOG). · CTCSS on receive only if user selectable; else CSQ. · "$" indicates hexadecimal value.					

Appendix E-3 Federal Interoperability Search and Rescue

Table 38: Federal/Non-Federal SAR Command Interoperability Plan

FEDERAL/NON-FEDERAL SAR COMMAND INTEROPERABILITY PLAN					
	Channel Name	**Mob. RX Freq. (MHz)**	**Mobile RX CTCSS/NAC**	**Mob. TX Free. (MHz)**	**Mobile TX CTCSS/NAC**
CONNECT WITH GATEWAY	IR 12*	410.8375	CSQ	419.8375	167.9
	VTAC14	159.4725	156.7	159.4725	156.7
	UTAC43	453.8625	156.7	458.8625	156.7
	8TAC94	853.0125	156.7	808.0125	156.7
	VHF Marine Ch. 17**	156.8500	CSQ	156.8500	----------
This table does not convey authority to operate. Always monitor and verify the channels are not in use prior to operating. If a repeater is not available, substitute the corresponding talk-around channel: IR 18 for IR 12, UTAC43D for UTAC43, 8TAC94D for 8TAC94. *See Conditions for Use of Federal Interoperability Channels on pages 19-21 (NIFOG). **Use of VHF Marine Ch. 17 requires an FCC STA and use emission – 16K0F3E (5 kHz deviation wideband analog FM).					

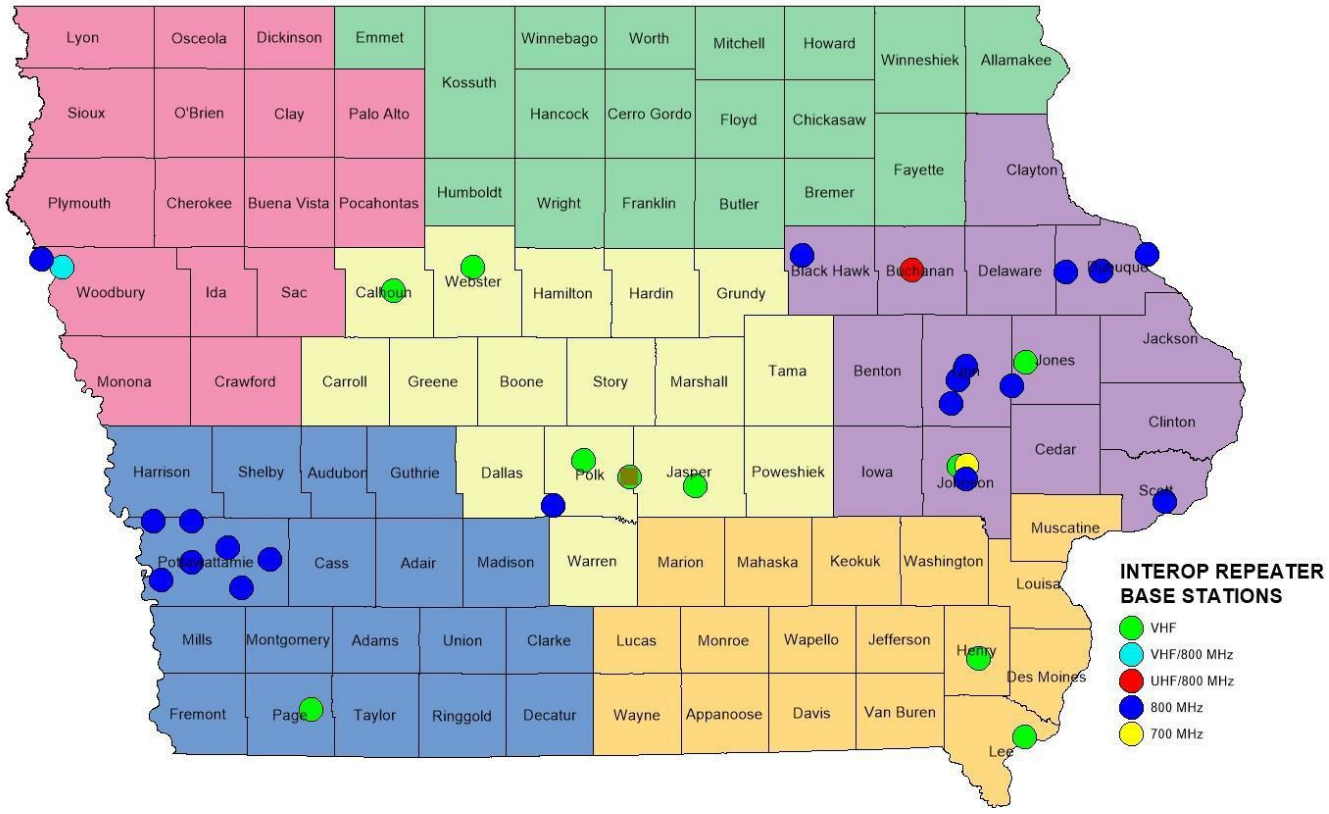
Table 39: Federal/Non-Federal SAR Operations Interoperability Plan

FEDERAL/NON-FEDERAL SAR OPERATIONS INTEROPERABILITY PLAN	
Direction from USCG, FCC, or FAA overrides information in this table. This table does not convey authority to operate.	
Suggested SAR Function	**Channel/Frequency (MHz)**
Ground Operations	155.1600 MHz (VSAR16 – License Required) 2.5 kHz deviation narrowband analog FM.
Maritime Operations *	157.0500 MHz or 157.1500 MHz (VHF Marine 21A or 23A) as specified by USCG Sector Commander.
Air Operations - civilian	123.100 MHz AM (may not be used for tests or exercises).
Air Operations – USCG/Military	345.0 MHz AM for initial contact only, then move to 282.8 MHz AM or other working channel.
Air rescue assets to air rescue assets (deconfliction)	As charted on standard air chart or MULTICOM 122.850 MHz (south or west sector) & 122.900 MHz (north or east sector), or as specified by FAA. 122.850 MHz may not be used for tests or exercises.
Ground to Air SAR Working Channel	157.1750 MHz VHF Marine 83A (21A, 23A, or 81A alternates as specified by local USCG Sector Commander **).
Ground to Maritime SAR working channel	157.0500 MHz VHF Marine 21A (23A, 81A, or 83A alternates as specified by local USCG Sector Commander **)..
Maritime/Air/Ground SAR working channel *	157.1750 MHz VHF Marine 83A (21A, 23A, or 81A are alternates as specified by local USCG Sector Commander **)
EMS/Medical Support	155.3400 MHz (VMED28 – License Required) 2.5 kHz deviation narrowband analog FM
Hailing* & DISTRESS only – Maritime/Air/Ground	156.8000 MHz VHF Marine 16 *
VHF marine channels use emission 16K0F3E (5 kHz deviation analog FM). * Use VHF Marine Ch.16 to make contact (30 seconds max.), then move to appropriate working channel as directed by local USCG Sector Commander. Non-maritime use of any VHF Marine channel requires FCC Special Temporary Authority or appropriate license. ** VHF Marine channels: 16=156.8000 21A=157.0500 22A=157.1000 23A=157.1500 81A=157.0750 82A=157.1250 83A=157.1750.	

Appendix F Interoperability Base Stations and Fixed Repeaters

Some agencies have deployed base stations or fixed-site repeaters that provide interoperable communications allowing efficient coordination of first responders during an incident or planned event.

Detailed information on interoperability repeaters and base stations is listed below.



Appendix F-1 Interoperability Base Stations and Fixed Repeater Summary

Table 40: Interoperability Base Stations and Fixed Repeaters

County	Owning Agency	24/7 Phone	Repeater Location	Freq. Band
Calhoun	Iowa Department of Corrections	712-695-7140	42.392111; -94.606389	VHF
Henry	Iowa Department of Corrections	712-695-7140	40.955770; -91.535910	VHF
Jasper	Iowa Department of Corrections	712-695-7140	41.61897222; -93.05519444	Jasper
Jasper	Iowa Department of Corrections	712-695-7140	41.6295; -93.05691667	Jasper
Johnson	Iowa Department of Corrections	712-695-7140	41.705360; -91.641900	VHF
Jones	Iowa Department of Corrections	712-695-7140	42.111460; -91.289470	VHF
Lee	Iowa Department of Corrections	712-695-7140	40.650380; -91.297170	VHF
Page	Iowa Department of Corrections	712-695-7140	40.760210; -95.037510	VHF
Polk	Iowa Department of Corrections	712-695-7140	41.729650; -93611160	VHF
Polk	Iowa Department of Corrections	712-695-7140	41.666000; -93.366810	VHF
Webster	Iowa Department of Corrections	712-695-7140	42.484920; -94.192170	VHF
Black Hawk	University of Northern Iowa	319-273-2712	125 Gilchrist Hall, Cedar Falls, IA	800 MHz
Buchanan	Buchanan County	319-334-2567	210 5th Ave. NE, Independence, IA	UHF/ 800 MHz
Dubuque	Dubuque County Comms	563-583-1711	2375 Roosevelt, Dubuque, IA	800 MHz
Dubuque	Dubuque County Comms	563-583-1711	Wuchter Rd., Dyersville, IA	800 MHz

County	Owning Agency	24/7 Phone	Repeater Location	Freq. Band
Dubuque	Dubuque County Comms	563-583-1711	Sroka Lane, Epworth, IA	800 MHz
Johnson	Johnson County	319-356-6800	Coralville, IA	700 MHz
Johnson	Johnson County	319-356-6800	Iowa City, IA	800 MHz
Jones	Jones County Sheriff	319-462-4371	108 Hubbell St., Martelle, IA	800 MHz
Linn	Cedar Rapids Joint Comms	319-286-5491	1000 27th Ave. SW, Cedar Rapids, IA	800 MHz
Linn	Cedar Rapids Joint Comms	319-286-5491	707 Boyson Rd. NE, Cedar Rapids, IA	800 MHz
Linn	Marion PD	319-286-5491	2425 Country Home Rd., Marion, IA	800 MHz
Polk	Westcom Emergency Comms	515-222-3321	S 59th St and Waterford Drive West Des Moines, IA	800 MHz
Polk	Westcom Emergency Comms	515-222-3321	S 59th St and Waterford Drive West Des Moines, IA	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	Memorial Park Water Tower Council Bluffs, IA	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	40790 Highway 92, Carson, IA	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	5 Miles West of Hancock, Hancock, IA	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	2 Miles East of McClelland, McClelland	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	16664 Whippoorwill Rd., Honey Creek	800 MHz
Pottawattamie	Pottawattamie County	712-328-5737	48751 Juniper Rd., Hancock, IA	800 MHz
Scott	Scott County	563-484-3000	1100 E. 46th St., Davenport, IA	800 MHz
Scott	Scott County	563-484-3000	Forest Grove Dr., Bettendorf, IA	800 MHz
Scott	Scott County	563-484-3000	1100 E 46th St., Davenport, IA	800 MHz
Scott	Scott County	563-484-3000	18850 Scott Park Rd., Eldridge, IA	700 MHz
Scott	Scott County	563-484-3000	Lost Grove Rd., Princeton, IA	700 MHz
Scott	Scott County	563-484-3000	.9 KM South of I-280/US61 Interchange	700 MHz
Scott	Scott County	563-484-3000	220th St., Durant, IA	700 MHz
Woodbury	Sioux City, IA	712-737-3307	4647 Stone Ave., Woodbury, Sioux City	800 MHz
Woodbury	Sioux City, IA	712-737-3307	4647 Stone Ave., Woodbury, Sioux City	800 MHz
Woodbury	Sioux City, IA	712-737-3307	3301 W 19th St., Sioux City, IA	800 MHz

Appendix F-2 Interoperability Base Stations and Repeater Detail

Owning/Responsible Agency	University of Northern Iowa				
Primary Point of Contact					
Contact Email					
24/7 Phone	319-273-2712				
County	Blackhawk				
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
8CALL90	Gilchrist Hall	125 Gilchrist Hall, Cedar Falls, IA			

Owning/Responsible Agency	Buchanan County				
Primary Point of Contact	Buchanan Co. Communications Center				
Contact Email					
24/7 Phone	319-334-2567				
County	Buchanan				
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
8CALL90	5th Avenue	210 5th Ave. NE, Independence, IA			

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Calhoun

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Calhoun VCALL10	42.392111; -94.606389	1,207	37	100 W
VTAC11	Iowa DOC Calhoun VTAC11	42.392111; -94.606389	1,207	37	100 W
VTAC12	Iowa DOC Calhoun VTAC12	42.392111; -94.606389	1,207	37	100 W
VTAC13	Iowa DOC Calhoun VTAC13	42.392111; -94.606389	1,207	37	100 W
VTAC14	Iowa DOC Calhoun VTAC14	42.392111; -94.606389	1,207	37	100 W

Owning/Responsible Agency	Dubuque County
Primary Point of Contact	Dubuque Co. Communications Center
Contact Email	
24/7 Phone	563-583-1711
County	Dubuque

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8CALL90	Roosevelt8CALL90	2375 Roosevelt, Dubuque, IA			
8TAC91	Wuchter RD8TAC91	Wuchter Rd., Dyersville, IA			
8TAC92	Roosevelt 8TAC92	2375 Roosevelt, Dubuque, IA			
8TAC93	Wuchter8TAC93	Wuchter Rd., Dyersville, IA			
8TAC94	Sroka8TAC94	Sroka Lane, Epworth, IA			

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Henry

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Henry VCALL10	40.955770; -91.535910	731	136	100 W
VTAC11	Iowa DOC Henry VTAC11	40.955770; -91.535910	731	136	100 W
VTAC12	Iowa DOC Henry VTAC12	40.955770; -91.535910	731	136	100 W
VTAC13	Iowa DOC Henry VTAC13	40.955770; -91.535910	731	136	100 W
VTAC14	Iowa DOC Henry VTAC14	40.955770; -91.535910	731	136	100 W
VLAW31	Iowa DOC Henry VLAW31	40.955770; -91.535910	731	59	100 W

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Jasper

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Jasper VCALL10	41.6295; -93.05691667	880	80	100 W
VTAC11	Iowa DOC Jasper VTAC11	41.6295; -93.05691667	880	80	100 W
VTAC12	Iowa DOC Jasper VTAC12	41.6295; -93.05691667	880	80	100 W
VTAC13	Iowa DOC Jasper VTAC13	41.6295; -93.05691667	880	80	100 W
VTAC14	Iowa DOC Jasper VTAC14	41.6295; -93.05691667	880	80	100 W
VCALL10	Iowa DOC Jasper VCALL10	41.61897222; -93.05519444	880		100 W
VTAC11	Iowa DOC Jasper VTAC11	41.61897222; -93.05519444	880		100 W
VTAC12	Iowa DOC Jasper VTAC12	41.61897222; -93.05519444	880		100 W
VTAC13	Iowa DOC Jasper VTAC13	41.61897222; -93.05519444	880		100 W
VTAC14	Iowa DOC Jasper VTAC14	41.61897222; -93.05519444	880		100 W

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Johnson

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Johnson VCALL10	41.705360; -91.641900	813	48	100 W
VTAC11	Iowa DOC Johnson VTAC11	41.705360; -91.641900	813	48	100 W
VVTAC12	Iowa DOC Johnson VTAC12	41.705360; -91.641900	813	48	100 W
VTAC13	Iowa DOC Johnson VTAC13	41.705360; -91.641900	813	48	100 W
VTAC14	Iowa DOC Johnson VTAC14	41.705360; -91.641900	813	48	100 W
VLAW31	Iowa DOC Johnson VLAW31	41.705360; -91.641900	813	20	50 W

Owning/Responsible Agency	Coralville
Primary Point of Contact	Johnson Co. Joint Emergency Communications Services Association
Contact Email	
24/7 Phone	319-356-6800
County	Johnson

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
7TAC73	Coralville7TAC73	Coralville, IA			

Owning/Responsible Agency	Iowa City
Primary Point of Contact	Johnson Co. Joint Emergency Communications Services Association
Contact Email	
24/7 Phone	319-356-6800
County	Johnson

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8TAC91	IowaCity8TAC91	Iowa City, IA			

Owning/Responsible Agency		Iowa Department of Corrections			
Primary Point of Contact		Patrick Updike			
Contact Email		patrick.updike@iowa.gov			
24/7 Phone		712-695-7140			
County		Jones			
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
VCALL10	Iowa DOC Jones VCALL10	42.111460; -91.289470	853	160	100 W
VTAC11	Iowa DOC Jones VTAC11	42.111460; -91.289470	853	160	100 W
VTAC12	Iowa DOC Jones VTAC12	42.111460; -91.289470	853	160	100 W
VTAC13	Iowa DOC Jones VTAC13	42.111460; -91.289470	853	160	100 W
VTAC14	Iowa DOC Jones VTAC14	42.111460; -91.289470	853	160	100 W
VLAW31	Iowa DOC Jones VLAW31	42.111460; -91.289470	853	160	100 W

Owning/Responsible Agency		Jones County			
Primary Point of Contact		Jones County Sheriff			
Contact Email					
24/7 Phone		319-462-4371			
County		Jones			
Channel	Repeater Name	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
8TAC91	Martelle8TAC91	108 Hubbell St,. Martelle, IA			
8TAC94	Sroka8TAC94	Sroka Lane, Epworth, IA			

Owning/Responsible Agency		Iowa Department of Corrections			
Primary Point of Contact		Patrick Updike			
Contact Email		patrick.updike@iowa.gov			
24/7 Phone		712-695-7140			
County		Lee			
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
VCALL10	Iowa DOC Lee VCALL10	40.650380; -91.297170	712	120	100 W
VTAC11	Iowa DOC Lee VTAC11	40.650380; -91.297170	712	120	100 W
VTAC12	Iowa DOC Lee VTAC12	40.650380; -91.297170	712	120	100 W
VTAC13	Iowa DOC Lee VTAC13	40.650380; -91.297170	712	120	100 W
VTAC14	Iowa DOC Lee VTAC14	40.650380; -91.297170	712	120	100 W
VLAW31	Iowa DOC Lee VLAW31	40.650380; -91.297170	712	65	25 W

Owning/Responsible Agency		Cedar Rapids Joint Communications Agency			
Primary Point of Contact		Cedar Rapids Joint Communications Agency			
Contact Email					
24/7 Phone		319-286-5491			
County		Linn			
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
8TAC92	CedarRapids8TAC92	1000 27th Ave. SW, Cedar Rapids			
8TAC94	CedarRapids8TAC94	707 Boyson Rd. NE, Cedar Rapids			

Owning/Responsible Agency		Marion PD			
Primary Point of Contact		Marion PD			
Contact Email					
24/7 Phone		319-377-1511			
County		Linn			
Channel	**Repeater Name**	**Tower Location**	**Elev (ft)**	**Ant Ht (ft)**	**Power**
8CALL90	Marion8CALL90	2425 County Home Rd., Marion			

Owning/Responsible Agency	Westcom Emergency Communications
Primary Point of Contact	
Contact Email	
24/7 Phone	515-222-3321
County	Polk

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8CALL90	Waterford8CALL90	S 50th St and Waterford Dr., West Des Moines, IA			
8TAC91	Waterford8TAC91	S 50th St and Waterford Dr., West Des Moines, IA			

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Page

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Page VCALL10	40.760210; -95.037510	1069	151	100 W
VTAC11	Iowa DOC Page VTAC11	40.760210; -95.037510	1069	151	100 W
VTAC12	Iowa DOC Page VTAC12	40.760210; -95.037510	1069	151	100 W
VTAC13	Iowa DOC Page VTAC13	40.760210; -95.037510	1069	151	100 W
VTAC14	Iowa DOC Page VTAC14	40.760210; -95.037510	1069	151	100 W
VFIRE21	Iowa DOC Page VFIRE21	40.760210; -95.037510	1069	151	100 W
VLAW31	Iowa DOC Page VLAW31	40.760210; -95.037510	1069	65	25 W

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Polk

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Polk VCALL10	41.729650; -93.611160	966	146	100 W
VTAC11	Iowa DOC POLK VTAC11	41.729650; -93.611160	966	146	100 W
VTAC12	Iowa DOC POLK VTAC12	41.729650; -93.611160	966	146	100 W
VTAC13	Iowa DOC POLK VTAC13	41.729650; -93.611160	966	146	100 W
VTAC14	Iowa DOC POLK VTAC14	41.729650; -93.611160	966	146	100 W
VLAW31	Iowa DOC POLK VLAW31	41.729650; -93.611160	966	75	100 W
VCALL10	Iowa DOC Polk VCALL10	41.666000; -93.366810	946	146	100 W
VTAC11	Iowa DOC POLK VTAC11	41.666000; -93.366810	946	146	100 W
VTAC12	Iowa DOC POLK VTAC12	41.666000; -93.366810	946	146	100 W
VTAC13	Iowa DOC POLK VTAC13	41.666000; -93.366810	946	146	100 W
VTAC14	Iowa DOC POLK VTAC14	41.666000; -93.366810	946	146	100 W
VLAW31	Iowa DOC POLK VLAW31	41.666000; -93.366810	946	75	100 W

Owning/Responsible Agency	Pottawattamie County
Primary Point of Contact	Pottawattamie County
Contact Email	Pottawattamie Co. Law Enforcement 911 Center
24/7 Phone	712-328-5737
County	Pottawattamie

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8CALL90	CouncilBluffs8CALL90	Memorial Park Water Tower Council Bluffs, IA			
8CALL90	Carson8CALL90	40790 Highway 92, Carson, IA			
8CALL90	Hancock8CALL90	5 Miles west of Hancock, IA			
8CALL90	McClelland8CALL90	2 miles east of McClelland, IA			
8CALL90	HoneyCreek8CALL90	16664 Whippoorwill Rd. Honey Creek, IA			
8CALL90	Neola8CALL90	27270 Whippoorwill Rd Neola, IA			
8CALL90	Juniper8CALL90	48751 Juniper Rd., Hancock, IA			

Owning/Responsible Agency	Scott Emergency Communications Center
Primary Point of Contact	
Contact Email	
24/7 Phone	563-484-3000
County	Scott

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8TAC92	Bettendorf8TAC92	Forest Grove Dr., Bettendorf, IA			
8CALL90	Davenport8CALL90	1100 E. 46th St., Davenport, IA			
8TAC94	Davenport8TAC94	1100 E. 46th St., Davenport, IA			
7TAC53	I280/US617TAC63	9km south of I280/US61 Interchange, Davenport			
7TAC51	Eldridge7TAC51	18850 Scott Park Rd., Eldridge, IA			
7TAC52	Princeton7TAC52	Lost Grove Rd., Princeton, IA			
7TAC54	Durant7TAC54	220th St., Durant, IA			

Owning/Responsible Agency	Iowa Department of Corrections
Primary Point of Contact	Patrick Updike
Contact Email	patrick.updike@iowa.gov
24/7 Phone	712-695-7140
County	Webster

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
VCALL10	Iowa DOC Webster VCALL10	42.484920; -94.192170	1,115	49	100 W
VTAC11	Iowa DOC Webster VTAC11	42.484920; -94.192170	1,115	49	100 W
VTAC12	Iowa DOC Webster VTAC12	42.484920; -94.192170	1,115	49	100 W
VLAW31	Iowa DOC Webster VLAW31	42.484920; -94.192170	1,115	49	50 W
VTAC38	Iowa DOC Webster VTAC38	42.484920; -94.192170	1,115	49	100 W

Owning/Responsible Agency	Sioux City
Primary Point of Contact	Woodbury Co. Communications
Contact Email	
24/7 Phone	712-279-6960
County	Woodbury

Channel	Repeater Name	Tower Location	Elev (ft)	Ant Ht (ft)	Power
8CALL90	SiouxCity8CALL90	4647 Stone Ave., Woodbury Sioux City, IA			
8TAC91	SiouxCity8TAC91	4647 Stone Ave., Woodbury Sioux City, IA			
8TAC92	SiouxCity8TAC92	3301 W 19th St. Sioux City, IA			
VCALL10	SiouxCityVCALL10	4647 Stone Ave., Woodbury Sioux City, IA			

Appendix G Gateways

Detailed information on gateways available for use in Iowa is listed in subsequent pages of this Appendix. The table below lists the owning or managing agency, gateway names, make/model and whether the device is fixed or mobile.

Appendix G-1 Fixed Gateways Summary

Table 41: Console Patches and Fixed Gateways Summary

Region	County	Dispatch Center/Location	24/7 Phone	Nets	Supported Channels/Talkgroups
State					
Pending					
Region 1					
Region 2					
Region 3					
Region 4					
Region 5					
Region 6					

Table 42: Agency IP Gateways/ISSI Connections

Region	County	Owning Agency	24/7 Phone	Gateway Type	Connected Systems
		None identified		☐ IP Gateway ☐ ISSI	
		None identified		☐ IP Gateway ☐ ISSI	
		None identified		☐ IP Gateway ☐ ISSI	
		None identified		☐ IP Gateway ☐ ISSI	
		None identified		☐ IP Gateway ☐ ISSI	
		None identified		☐ IP Gateway ☐ ISSI	

Appendix G-2 Fixed Gateway Detail

Gateway/ISSI	
Agency	
Type	☐ IP Gateway ☐ ISSI
Primary Point of Contact (POC)	
POC Title	
POC Phone	
POC Email	
24/7 Phone	
Other Comments or Notes	
Radio Systems Supported	
Supported Channels/Talkgroups	

Appendix G-3 Transportable Gateways Summary

Table 43: Transportable Gateways

Owning Agency	Location Kept	24/7 Phone	Make/Model	Nets	Ports	Includes
ISICSB	Central STR Trailer, Aurelia, IA	515-725-3231	JPS/ACU5000			☐ Cables ☐ Radios
ISICSB	East STR Trailer, Iowa City, IA in summer and Davenport, IA in winter	515-725-3231	JPS/ACU5000			☐ Cables ☐ Radios
ISICSB	West STR Trailer, Des Moines, IA	515-725-3231	JPS/ACU5000			☐ Cables ☐ Radios

Appendix G-4 Transportable Gateway Detail

Gateway Name	Central STR Transportable Gateway			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			
Location Kept	Located in Central STR Trailer, Aurelia, IA			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
POC Phone	515-725-6091			
Email address	nichols@dps.state.ia.us			
Equipment Make/Model	JPS/ACU5000 Gateway			
Accessories	☒	Includes Radios	☒	Cables Only
Deployment Method	☐	Vehicle-mounted	☒	Transportable/Cased
Notes:	Includes 4 ACU connection cables – 1 for Motorola APX6000, 1 for Harris Quad Band, and 2 unterminated.			

Gateway Name	East STR Transportable Gateway			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			
Location Kept	Des Moines			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
POC Phone	nichols@dps.state.ia.us			
Email address	515-201-7478			
Equipment Make/Model	JPS/ACU5000 Gateway			
Accessories	☒	Includes Radios	☒	Cables Only
Deployment Method	☐	Vehicle-mounted	☒	Transportable/Cased
Notes:	Includes 4 ACU connection cables – 2 for Harris Quad Band radios, and 2 unterminated.			

Gateway Name	West STR Transportable Gateway			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			
Location Kept	Des Moines			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
POC Phone	515-725-6091			
Email address	nichols@dps.state.ia.us			
Equipment Make/Model	JPS/ACU5000 Gateway			
Accessories	☒	Includes Radios	☒	Cables Only
Deployment Method	☐	Vehicle-mounted	☒	Transportable/Cased
Notes:	Includes 4 ACU5000 connection cables – 1 for APX7500, 1 for APX7000, 1 for AP6000, and 1 for GTR8000			

Appendix H Transportable Repeaters

Information on transportable repeaters available for use in Iowa is listed in subsequent pages of this appendix. The table below lists the owning or managing agency, cache, frequency band and channels for each repeater.

Table 44: Transportable Repeaters

Owning Agency	24/7 Phone	Location	Freq. Band	Channel(s)
ISICSB	515-323-4360	Central STR, Aurelia	UHF	
ISICSB	515-323-4360	Central STR, Aurelia	800 MHz	
ISICSB	515-323-4360	Eastern STR, Iowa City Summer, Davenport Winter	800 MHz	
ISICSB	515-323-4360	West STR, Des Moines	VHF/700	

Appendix H-1 Transportable Repeater Detail

Repeater Name	Central STR UHF Repeater
Responsible Agency/Location	Iowa Statewide Interoperable Communications System Board (ISICSB)
Location Kept	Central STR, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris Master III UHF Repeater (SXUMCX)
Power Output	
Frequency Band	☐ VHF ☒ UHF ☐ 700 MHz ☐ 800 MHz ☐ Other
Power Requirements	☐ Internal battery ☐ 12VDC ☐ 120VAC ☐ Other
Length of operation on battery	
Included Antenna Equipment	☐ Antenna system ☒ Mast or tower ☐ Other
Other Comments or notes	

Repeater Name	Central STR 800 MHz Repeater
Responsible Agency/Location	Iowa Statewide Interoperable Communications System Board (ISICSB)
Location Kept	Central STR, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris Master III 800 MHz Repeater (SX8MCXE)
Power Output	
Frequency Band	☐ VHF ☐ UHF ☐ 700 MHz ☒ 800 MHz ☐ Other
Power Requirements	☐ Internal battery ☐ 12VDC ☐ 120VAC ☐ Other
Length of operation on battery	
Included Antenna Equipment	☐ Antenna system ☒ Mast or tower ☐ Other
Other Comments or notes	

Repeater Name	East STR Mobile Repeater
Responsible Agency/Location	Iowa Statewide Interoperable Communications System Board (ISICSB)
Location Kept	East STR, Iowa City in summer and Davenport in the winter
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris Master III 800 MHz Repeater (SX8MCXE)
Power Output	
Frequency Band	☐ VHF ☐ UHF ☐ 700 MHz ☒ 800 MHz ☐ Other
Power Requirements	☐ Internal battery ☐ 12VDC ☐ 120VAC ☐ Other
Length of operation on battery	
Included Antenna Equipment	☐ Antenna system ☒ Mast or tower ☐ Other
Other Comments or notes	

Repeater Name	West STR Mobile Repeater
Responsible Agency/Location	Iowa Statewide Interoperable Communications System Board (ISICSB)
Location Kept	West STR, Des Moines
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Motorola GTR8000 Mobile Repeater
Power Output	
Frequency Band	☒ VHF ☐ UHF ☒ 700 MHz ☐ 800 MHz ☐ Other
Power Requirements	☐ Internal battery ☐ 12VDC ☐ 120VAC ☐ Other
Length of operation on battery	
Included Antenna Equipment	☐ Antenna system ☒ Mast or tower ☐ Other
Other Comments or notes	Trunked System

Appendix I Mobile Radio Systems

Information on mobile radio systems available for use in Iowa is listed in subsequent pages of this Appendix. The table below lists the owning or managing agency, cache, frequency band and channels used by each radio system.

Table 45: Mobile Radio Systems

Owning Agency	24/7 Phone	Location	Freq. Band	Channel(s)
ISICSB	515-725-3231	Central STR, Aurelia, IA	Tri-Band	
ISICSB	515-725-3231	East STR, Iowa City in summer, Davenport, IA in winter	Quad-Band	
ISICSB	515-725-3231	West STR, Des Moines, IA	Dual-Band	

Appendix I-1 Mobile Radio System Detail

Mobile System Name	Iowa DPS Mobile Command Radio System			
Responsible Agency	Iowa DPS			
Location Kept	DPS Mobile Command Vehicle, Des Moines, IA			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Heath Hove			
POC Title	Lieutenant			
Phone	515-204-7288			
Email address	hove@dps.state.ia.us			
Time to Deploy (Hrs.)				
Deployment Method	☒ Driven	☒ Towed	☐ Conveyed	☐ Other
Shoreline Power	☐ 220 VAC	☐ 110 VAC	☐ Other	☐ None
Generator (kW)	☐ None	☐ <5 kW	☐ 5-9 kW	☐ 10-14 kW
	☐ 15-24 kW	☐ 25> kW	☒ Other	
Generator Fuel Type	☐ Vehicle Fuel	☒ Diesel	☐ Gasoline	☐ Other
Generator Fuel (Hrs.)	48			
Extendable Mast Height	☐ <10 Feet	☐ 10-20 Feet	☐ 21-35 Feet	☒ 36-50 Feet
System Frequency Band(s)	☐ VHF-High	☐ UHF	☒ 700 MHz	☒ 800 MHz
	☐ VHF (Fed)	☐ UHF (Fed)	☐ HF	☐ VHF-Low
	☐ 220 MHz	☐ Other	☐ Unknown	
System Type	☐ Conventional	☒ Trunked	☒ Both	☐ Unknown
Trunking Standard, if applicable	☐ LTR	☐ EDACS	☐ Open Sky	☐ Other
	☐ Smart Zone	☐ SmartNet	☒ P-25	☐
P-25 Compliance	☐ None	☐ P-25 Phase I	☒ P-25 Phase II	☐ Unknown
Encryption Supported	☐ None	☐ AES	☐ ADP	☐ DES
	☐ DES-XL	☐ DVP	☐ Other	☐ Unknown
Notes	1 Motorola MCC7500 Console connected to the ISICS core; four-channel Motorola GTR trunking site configured to integrate with the Iowa Statewide Interoperable Communications System in site trunking or wide-area trunking; Zetron 9-1-1 call taking equipment connected to the state CPE and Shared Services. Any deployment of this vehicle must be coordinated with Iowa DPS and HSEMD. DPS will ensure the site adjacency tables are updated for the mobile site and HSEMD will ensure 911 calls are routed appropriately.			
Mobile System Name	Central STR Mobile Radio System			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			

Location Kept	Central STR Trailer, Aurelia, IA			
Area will respond to	Statewide			
Location Kept	Des Moines, IA			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
Phone	515-725-6091			
Email address	nichols@dps.state.ia.us			
Time to Deploy (Hrs.)				
Deployment Method	☐ Driven	☒ Towed	☐ Conveyed	☐ Other
Shoreline Power	☐ 220 VAC	☐ 110 VAC	☐ Other	☐ None
Generator (kW)	☐ None	☐ <5 kW	☐ 5-9 kW	☐ 10-14 kW
	☐ 15-24 kW	☐ 25> kW	☒ Other	
Generator Fuel Type	☐ Vehicle Fuel	☒ Diesel	☐ Gasoline	☐ Other
Generator Fuel (Hrs.)	48			
Extendable Mast Height	☐ <10 Feet	☐ 10-20 Feet	☐ 21-35 Feet	☒ 36-50 Feet
System Frequency Band(s)	☐ VHF-High	☐ UHF	☒ 700 MHz	☒ 800 MHz
	☐ VHF (Fed)	☒ UHF (Fed)	☐ HF	☐ VHF-Low
	☐ 220 MHz	☐ Other	☐ Unknown	
System Type	☐ Conventional	☐ Trunked	☒ Both	☐ Unknown
Trunking Standard, if applicable	☐ LTR	☐ EDACS	☐ Open Sky	☐ Other
	☐ Smart Zone	☐ SmartNet	☐ P-25	☐
P-25 Compliance	☐ None	☐ P-25 Phase I	☐ P-25 Phase II	☐ Unknown
Encryption Supported	☐ None	☐ AES	☐ ADP	☐ DES
	☐ DES-XL	☐ DVP	☐ Other	☐ Unknown
Notes	40’ antenna Harris Unity UHF/7-800/800 Tri-Band XG-100M			

Mobile System Name	East STR Mobile Radio System			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			
Location Kept	East STR Trailer, Iowa City, IA in summer, Davenport, IA in winter			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
Phone	515-725-6091			
Email address	nichols@dps.state.ia.us			
Time to Deploy (Hrs.)				
Deployment Method	☐ Driven	☒ Towed	☐ Conveyed	☐ Other
Shoreline Power	☐ 220 VAC	☐ 110 VAC	☐ Other	☐ None
Generator (kW)	☐ None	☐ <5 kW	☐ 5-9 kW	☐ 10-14 kW
	☐ 15-24 kW	☐ 25> kW	☒ Other	☐
Generator Fuel Type	☐ Vehicle Fuel	☒ Diesel	☐ Gasoline	☐ Other
Generator Fuel (Hrs.)	48	☐	☐	☐
Extendable Mast Height	☐ <10 Feet	☐ 10-20 Feet	☐ 21-35 Feet	☒ 36-50 Feet
System Frequency Band(s)	☒ VHF-High	☒ UHF	☒ 700 MHz	☒ 800 MHz
	☐ VHF (Fed)	☐ UHF (Fed)	☐ HF	☐ VHF-Low
	☐ 220 MHz	☐ Other	☐ Unknown	☐
System Type	☐ Conventional	☐ Trunked	☒ Both	☐ Unknown
Trunking Standard, if applicable	☐ LTR	☐ EDACS	☐ Open Sky	☐ Other
	☐ Smart Zone	☐ SmartNet	☐ P-25	☐
P-25 Compliance	☐ None	☐ P-25 Phase I	☐ P-25 Phase II	☐ Unknown
Encryption Supported	☐ None	☐ AES	☐ ADP	☐ DES
	☐ DES-XL	☐ DVP	☐ Other	☐ Unknown
Notes	40’ antenna; Harris Unity Mobile UHF/700/800 Quad-Band XG-100M			

Mobile System Name	West STR Mobile Radio System			
Responsible Agency	Iowa Statewide Interoperable Communications System Board (ISICSB)			
Location Kept	Des Moines, IA			
Area will respond to	Statewide			
24/7 Phone	515-725-3231			
POC Name	Haley Nichols			
POC Title	Statewide Interoperability Coordinator			
Phone	515-725-6091			
Email address	nichols@dps.state.ia.us			
Time to Deploy (Hrs.)				
Deployment Method	☐ Driven	☒ Towed	☐ Conveyed	☐ Other
Shoreline Power	☐ 220 VAC	☐ 110 VAC	☐ Other	☐ None
Generator (kW)	☐ None	☐ <5 kW	☐ 5-9 kW	☐ 10-14 kW
	☐ 15-24 kW	☐ 25> kW	☒ Other	☐
Generator Fuel Type	☐ Vehicle Fuel	☒ Diesel	☐ Gasoline	☐ Other
Generator Fuel (Hrs.)	48	☐	☐	☐
Extendable Mast Height	☐ <10 Feet	☐ 10-20 Feet	☐ 21-35 Feet	☒ 36-50 Feet
System Frequency Band(s)	☐ VHF-High	☐ UHF	☒ 700 MHz	☒ 800 MHz
	☐ VHF (Fed)	☐ UHF (Fed)	☐ HF	☐ VHF-Low
	☐ 220 MHz	☐ Other	☐ Unknown	☐
System Type	☐ Conventional	☒ Trunked	☐ Both	☐ Unknown
Trunking Standard, if applicable	☐ LTR	☐ EDACS	☐ Open Sky	☐ Other
	☐ Smart Zone	☐ SmartNet	☒ P-25	☐
P-25 Compliance	☐ None	☐ P-25 Phase I	☒ P-25 Phase II	☐ Unknown
Encryption Supported	☐ None	☐ AES	☐ ADP	☐ DES
	☐ DES-XL	☐ DVP	☐ Other	☐ Unknown
Notes	40’ tower, Motorola APX7500 Dual Band Mobile Radio, six channel Motorola GTR trunking site configured to integrate with the Iowa Statewide Interoperable Communications System in site trunking or wide area trunking.			

Appendix J Radio Caches

Information on radio caches available for use in Iowa is listed in subsequent pages of this Appendix. The table below lists the owning or managing agency, cache, frequency band and quantity of radios in each cache. Please note: #/# refers to the amount of caches/total amount of radios.

Table 46: Radio Caches

Agency	24/7 Phone	VHF	UHF	700/800 MHz	800 MHz	Other
ISCSB – Central STR	515-725-3231		9			23 (Dual) 4 (Dual)
ISCSB – Eastern STR	515-725-3231					36 (Quad)
ISCSB – West STR	515-725-3231	32				4 (Dual)
ISICSB/DPS	515-725-3231					25 V/700/800

Appendix J-1 Radio Cache Programming Templates

Table 47: Law Enforcement Template

CH	VHF BAND	VHF BAND	UHF BAND	UHF BAND	700/800 BAND	700/800 BAND
1	VCALL10	VLAW31	UCALL40		7CALL50	8CALL90
2	VTAC11	VLAW32	UCALL40D		7TAC51	8CALL90D
3	VTAC12		UTAC41		7TAC51D	8TAC91
4	VTAC13		UTAC41D			8TAC91D
5	VTAC14		UTAC42			8TAC92
6			UTAC42D			8TAC92D
7			UTAC43			8TAC93
8			UTAC43D			8TAC93D
9						8TAC94
10						8TAC94D
11						8TAC95
12						8TAC95D
13						8TAC96
14						8TAC96D

Table 48: Fire Service/EMS Template

CH	VHF BAND	VHF BAND	UHF BAND	UHF BAND	700/800 BAND	700/800 BAND
1	VCALL10	VFIRE21	UCALL40		7CALL50	8CALL90
2	VTAC11	VFIRE22	UCALL40D		7TAC51	8CALL90D
3	VTAC12	VFIRE23	UTAC41		7TAC51D	8TAC91
4	VTAC13	VMED28	UTAC41D			8TAC91D
5	VTAC14	VMED29	UTAC42			8TAC92
6			UTAC42D			8TAC92D
7			UTAC43			8TAC93
8			UTAC43D			8TAC93D
9						8TAC94
10						8TAC94D
11						8TAC95
12						8TAC95D
13						8TAC96
14						8TAC96D

Table 49: All Discipline Template

CH	VHF BAND	VHF BAND	UHF BAND	UHF BAND	700/800 BAND	700/800 BAND
1	VCALL10	VLAW31	UCALL40		7CALL50	8CALL90
2	VTAC11	VLAW32	UCALL40D		7TAC51	8CALL90D
3	VTAC12	VFIRE21	UTAC41		7TAC51D	8TAC91
4	VTAC13	VFIRE22	UTAC41D			8TAC91D
5	VTAC14	VFIRE23	UTAC42			8TAC92
6		VMED28	UTAC42D			8TAC92D
7		VMED29	UTAC43			8TAC93
8			UTAC43D			8TAC93D
9						8TAC94
10						8TAC94D
11						8TAC95
12						8TAC95D
13						8TAC96
14						8TAC96D

Appendix J-2 Radio Cache Detail

Cache Name	DPS Motorola APX8000 Portable Radio Cache
Responsible Agency	Iowa Department of Public Safety
Location Kept	DPS Headquarters, 215 E. 7th St, Des Moines, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Motorola/APX8000
Number of Radios in Cache	25
Frequency Band	☒ VHF ☐ UHF ☒ 700 MHz ☒ 800 MHz ☐ Other
Radio Programming	☒ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☒ BELT CLIP ☒ SPARE BAT ☐ Other
Included Charger(S)	☒ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	
Trunked System (if applicable)	Iowa Statewide Interoperable Communications System (ISICS)

Cache Name	ISICSB Motorola UHF Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	Central STR Trailer, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Motorola APX6000 UHF Single Band Portable Radios
Number of Radios in Cache	9
Frequency Band	☐ VHF ☒ UHF ☐ 700 MHz ☐ 800 MHz ☐ Other
Radio Programming	☒ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	
Trunked System (if applicable)	ISICS

Cache Name	ISICSB Harris UHF/700-800 Dual Band Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	Central STR Trailer, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris/Unity XG-100P Portable Radios
Number of Radios in Cache	4
Frequency Band	☐ VHF ☒ UHF ☐ 700 MHz ☐ 800 MHz ☒ Other
Radio Programming	☐ NIFOG INTEROP ☒ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	UHF/7-800 MHz
Trunked System (if applicable)	ISICS

Cache Name	ISICSB Harris UHF Dual Band Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	Central STR Trailer, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris/P7350 UHF Dual Band Portable Radios
Number of Radios in Cache	23
Frequency Band	☐ VHF ☒ UHF ☐ 700 MHz ☐ 800 MHz ☒ Other
Radio Programming	☒ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	
Trunked System (if applicable)	ISICS

Cache Name	ISICSB Harris Quad Band Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	East STR Trailer, located in Iowa City (Summer) and Davenport (Winter)
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Harris/Quad Band Portable
Number of Radios in Cache	36
Frequency Band	☒ VHF ☒ UHF ☒ 700 MHz ☒ 800 MHz ☐ Other
Radio Programming	☒ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	
Trunked System (if applicable)	ISICS

Cache Name	ISICSB Motorola VHF Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	West STR Trailer, Des Moines, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Motorola/APX6000
Number of Radios in Cache	32
Frequency Band	☒ VHF ☐ UHF ☐ 700 MHz ☐ 800 MHz ☐ Other
Radio Programming	☒ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	
Trunked System (if applicable)	ISICS

Cache Name	ISICSB Motorola APX7000 Dual Band Portable Radio Cache
Responsible Agency	Iowa Statewide Interoperable Communications System Board
Location Kept	West STR Trailer, Des Moines, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
Phone	515-725-6091
Email address	nichols@dps.state.ia.us
Radio Mfg./ Model	Motorola/APX7000
Number of Radios in Cache	4
Frequency Band	☐ VHF ☐ UHF ☐ 700 MHz ☐ 800 MHz ☒ Other
Radio Programming	☐ NIFOG INTEROP ☐ STATE INTEROP ☐ CACHE TEMPLATE
Included Accessories	☐ SPKR/MIC ☐ HOLSTER ☐ BELT CLIP ☐ SPARE BAT ☐ Other
Included Charger(S)	☐ Multi-unit ☐ Single unit ☐ None ☐ Other
Other Comments or notes	Dual Band
Trunked System (if applicable)	ISICS

Appendix K Mobile Command Vehicles

Detailed information on mobile command vehicles (MCVs) or mobile communications units (MCUs) available in Iowa is listed in subsequent pages of Appendix K.

Table 50: Mobile Communication Vehicles

Vehicle ID Responsible Agency	24/7 Phone	Location Stored Deployment Area	Gateway or Cache Equipped	Seating	
				Dispatch	Command
DPS MCV / Iowa DPS	515-725-3231	Des Moines, IA	☐ Gateway ☐ Cache	2	4
Central STR / ISICSB	515-725-3231	Aurelia, IA Statewide	☒ Gateway ☒ Cache	1	0
East STR /ISICSB	515-725-3231	Iowa City/Davenport, IA Statewide	☒ Gateway ☒ Cache	1	0
West STR / ISICSB	515-725-3231	Des Moines, IA	☒ Gateway ☒ Cache	1	0

Appendix K-1 Mobile Command Vehicle Detail

MCV Name/Unit ID	DPS MCV							
Responsible Agency	Iowa DPS							
Location Kept	Des Moines							
Area will respond to	Statewide							
24/7 Phone	515-725-3231							
Time to Deploy	Any							
Deployment Method	☒	Driven	☐	Towed				
Vehicle Type	☒	RV/Custom/Bus	☐	SUV/Lt. Truck	☐	Trailer	☐	Other
No. of Conference Seats	4							
No. of Dispatch Seats	2							
Primary Point of Contact	Heath Hove							
POC Title	Lieutenant							
POC Phone	515-204-7288							
POC Email	hove@dps.state.ia.us							
SATCOM Equipment	☐	Sat Phone	☐	Sat Dish	☒	None		
Telephone Equipment	☐	Landline	☐	FAX	☒	Cellular	☐	None
No. of Telephone Lines								
Internet Equipment	☐	Satellite	☒	Cellular	☐	Other	☐	None
Internet Hotspot	☐	Can Provide	☐	None				
Broadband Equip Desc.					• *Broadband equipment used to provide on-scene wireless connectivity.*			
Broadband Equip. SSID								
Broadband Equip. CTN					• *CTN - Broadband equipment cellular telephone number (required for uplift)*			
Video Conference Equip.								
Video Capabilities	☐	Off-Air	☐	Satellite Dish	☐	Cable	☐	Able to Record
	☐	Streaming	☐	Vehicle CCTV	☐	Other	☒	None
Shoreline Power (Voltage)	☒	220 VAC	☒	110 VAC	☐	Other	☐	None
Shoreline Power (Amp)								
Shoreline Connector Type								
Generator (kW)	☐	None	☐	<5 kW	☐	5-9 kW	☐	10-14 kW
	☐	15-24 kW	☐	25> kW	☐	Other		
Generator Fuel Type	☐	Vehicle Fuel	☒	Diesel	☐	Gasoline	☐	Other
Generator Fuel (Hrs.)								
Gateway Equipment	None							
Radio Cache(s)	☐	VHF-Low	☐	VHF	☐	UHF	☐	Other
	☐	700 MHz	☐	800 MHz	☐	Multiband		
Radio Communications Capabilities	☐	VHF-Low	☐	VHF	☐	UHF	☐	Other
	☒	700 MHz	☒	800 MHz	☐	Amateur	☐	None
	☐	Marine	☐	Aircraft	☐	Local Trunked		
Extendable Mast Height	☐	<10 Feet	☒	10-35 Feet	☐	36-50 Feet	☐	>50 Feet
	☐	>50 Feet	☐	Other	☐	No Mast		
Notes	The DPS MCV has ISICS core-connected MCC7500 dispatch consoles, an ISICS mobile site that is core connected and 911 call-taking equipment on the DPS Shared Services platform. Any deployment of this vehicle needs to be coordinated with Iowa DPS and HSEMD. DPS will ensure the site adjacency tables are updated for the mobile site and HSEMD will ensure 911 calls are routed appropriately.							

MCV Name/Unit ID	ISICSB West STR							
Responsible Agency	Iowa ISICSB							
Location Kept	Des Moines							
Area will respond to	Statewide							
24/7 Phone	515-725-3231							
Time to Deploy	Any							
Deployment Method	☐	Driven	☒	Towed				
Vehicle Type	☐	RV/Custom/Bus	☐	SUV/Lt. Truck	☒	Trailer	☐	Other
No. of Conference Seats	0							
No. of Dispatch Seats	1							
Primary Point of Contact	Haley Nichols							
POC Title	Statewide Interoperability Coordinator							
POC Phone	515-725-6091							
POC Email	nichols@dps.state.ia.us							
SATCOM Equipment	☐	Sat Phone	☐	Sat Dish	☒	None		
Telephone Equipment	☐	Landline	☐	FAX	☐	Cellular	☒	None
No. of Telephone Lines								
Internet Equipment	☐	Satellite	☐	Cellular	☐	Other	☒	None
Internet Hotspot	☐	Can Provide	☒	None				
Broadband Equip Desc.					• *Broadband equipment used to provide on-scene wireless connectivity.*			
Broadband Equip. SSID								
Broadband Equip. CTN					• *CTN - Broadband equipment cellular telephone number (required for uplift)*			
Video Conference Equip.								
Video Capabilities	☐	Off-Air	☐	Satellite Dish	☐	Cable	☐	Able to Record
	☐	Streaming	☐	Vehicle CCTV	☐	Other	☒	None
Shoreline Power (Voltage)	☒	220 VAC	☐	110 VAC	☐	Other	☐	None
Shoreline Power (Amp)								
Shoreline Connector Type								
Generator (kW)	☐	None	☐	<5 kW	☒	5-9 kW	☐	10-14 kW
	☐	15-24 kW	☐	25> kW	☐	Other		
Generator Fuel Type	☐	Vehicle Fuel	☒	Diesel	☐	Gasoline	☐	Other
Generator Fuel (Hrs.)	60							
Gateway Equipment	ACU-5000							
Radio Cache(s)	☐	VHF-Low	☒	VHF	☐	UHF	☐	Other
	☐	700 MHz	☐	800 MHz	☐	Multiband		
Radio Communications Capabilities	☐	VHF-Low	☒	VHF	☐	UHF	☐	Other
	☒	700 MHz	☒	800 MHz	☐	Amateur	☐	None
	☐	Marine	☐	Aircraft	☐	Local Trunked		
Extendable Mast Height	☐	<10 Feet	☒	10-35 Feet	☐	36-50 Feet	☐	>50 Feet
	☐	>50 Feet	☐	Other	☐	No Mast		
Notes	The West STR has an ISICS mobile site that is core connected. It also has a VHF repeater and ACU 5000. Any deployment of this vehicle needs to be coordinated with Iowa DPS and HSEMD. DPS will ensure the site adjacency tables are updated for the mobile site.							

MCV Name/Unit ID	ISICSB Central STR							
Responsible Agency	Iowa ISICSB							
Location Kept	Des Moines							
Area will respond to	Statewide							
24/7 Phone	515-725-3231							
Time to Deploy	Any							
Deployment Method	☐	Driven	☒	Towed				
Vehicle Type	☐	RV/Custom/Bus	☐	SUV/Lt. Truck	☒	Trailer	☐	Other
No. of Conference Seats	0							
No. of Dispatch Seats	1							
Primary Point of Contact	Haley Nichols							
POC Title	Statewide Interoperability Coordinator							
POC Phone	515-725-6091							
POC Email	nichols@dps.state.ia.us							
SATCOM Equipment	☐	Sat Phone	☐	Sat Dish	☒	None		
Telephone Equipment	☐	Landline	☐	FAX	☐	Cellular	☒	None
No. of Telephone Lines								
Internet Equipment	☐	Satellite	☐	Cellular	☐	Other	☒	None
Internet Hotspot	☐	Can Provide	☒	None				
Broadband Equip Desc.					• *Broadband equipment used to provide on-scene wireless connectivity.*			
Broadband Equip. SSID								
Broadband Equip. CTN					• *CTN - Broadband equipment cellular telephone number (required for uplift)*			
Video Conference Equip.								
Video Capabilities	☐	Off-Air	☐	Satellite Dish	☐	Cable	☐	Able to Record
	☐	Streaming	☐	Vehicle CCTV	☐	Other	☒	None
Shoreline Power (Voltage)	☒	220 VAC	☐	110 VAC	☐	Other	☐	None
Shoreline Power (Amp)								
Shoreline Connector Type								
Generator (kW)	☐	None	☐	<5 kW	☒	5-9 kW	☐	10-14 kW
	☐	15-24 kW	☐	25> kW	☐	Other		
Generator Fuel Type	☐	Vehicle Fuel	☒	Diesel	☐	Gasoline	☐	Other
Generator Fuel (Hrs.)	60							
Gateway Equipment	None							
Radio Cache(s)	☐	VHF-Low	☐	VHF	☒	UHF	☐	Other
	☐	700 MHz	☐	800 MHz	☐	Multiband		
Radio Communications Capabilities	☐	VHF-Low	☐	VHF	☒	UHF	☐	Other
	☐	700 MHz	☐	800 MHz	☐	Amateur	☐	None
	☐	Marine	☐	Aircraft	☐	Local Trunked		
Extendable Mast Height	☐	<10 Feet	☒	10-35 Feet	☐	36-50 Feet	☐	>50 Feet
	☐	>50 Feet	☐	Other	☐	No Mast		
Notes	The Central STR has an UHF repeater and ACU 5000. Any deployment of this vehicle needs to be coordinated with Iowa DPS and HSEMD.							

MCV Name/Unit ID	ISICSB East STR							
Responsible Agency	ISICSB							
Location Kept	Des Moines							
Area will respond to	Statewide							
24/7 Phone	515-725-3231							
Time to Deploy	Any							
Deployment Method	☐	Driven	☒	Towed				
Vehicle Type	☐	RV/Custom/Bus	☐	SUV/Lt. Truck	☒	Trailer	☐	Other
No. of Conference Seats	0							
No. of Dispatch Seats	1							
Primary Point of Contact	Haley Nichols							
POC Title	Statewide Interoperability Coordinator							
POC Phone	515-725-6091							
POC Email	nichols@dps.state.ia.us							
SATCOM Equipment	☐	Sat Phone	☐	Sat Dish	☒	None		
Telephone Equipment	☐	Landline	☐	FAX	☐	Cellular	☒	None
No. of Telephone Lines								
Internet Equipment	☐	Satellite	☐	Cellular	☐	Other	☒	None
Internet Hotspot	☐	Can Provide	☒	None				
Broadband Equip Desc.					• *Broadband equipment used to provide on-scene wireless connectivity.*			
Broadband Equip. SSID								
Broadband Equip. CTN					• *CTN - Broadband equipment cellular telephone number (required for uplift)*			
Video Conference Equip.								
Video Capabilities	☐	Off-Air	☐	Satellite Dish	☐	Cable	☐	Able to Record
	☐	Streaming	☐	Vehicle CCTV	☐	Other	☒	None
Shoreline Power (Voltage)	☒	220 VAC	☐	110 VAC	☐	Other	☐	None
Shoreline Power (Amp)								
Shoreline Connector Type								
Generator (kW)	☐	None	☐	<5 kW	☒	5-9 kW	☐	10-14 kW
	☐	15-24 kW	☐	25> kW	☐	Other		
Generator Fuel Type	☐	Vehicle Fuel	☒	Diesel	☐	Gasoline	☐	Other
Generator Fuel (Hrs.)	60							
Gateway Equipment	None							
Radio Cache(s)	☐	VHF-Low	☐	VHF	☐	UHF	☐	Other
	☐	700 MHz	☐	800 MHz	☒	Multiband		
Radio Communications Capabilities	☐	VHF-Low	☐	VHF	☒	UHF	☐	Other
	☒	700 MHz	☒	800 MHz	☐	Amateur	☐	None
	☐	Marine	☐	Aircraft	☒	Local Trunked		
Extendable Mast Height	☐	<10 Feet	☒	10-35 Feet	☐	36-50 Feet	☐	>50 Feet
	☐	>50 Feet	☐	Other	☐	No Mast		
Notes	The East STR has an 800 repeater and ACU 5000. Any deployment of this vehicle needs to be coordinated with Iowa DPS and HSEMD.							

Appendix L Other Mobile Equipment

Detailed information on other mobile equipment available in Iowa is listed in subsequent pages of this Appendix.

Table 51: Mobile Equipment

Responsible Agency	24/7 Phone	Description	Location
Iowa DPS	515-725-3231	Diesel Generator	DPS MCV, Des Moines, IA
ISICSB	515-725-3231	Diesel Generator	Central STR, Aurelia, IA
ISICSB	515-725-3231	Diesel Generator	East STR, Iowa City/Davenport, IA
ISICSB	515-725-3231	Diesel Generator	West STR, Des Moines, IA

Appendix L-1 Mobile Equipment Detail

Name	DPS MCV Generator
Type	Diesel Generator
Responsible Agency	Iowa DPS
Location Kept	DPS MCV, Des Moines, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Heath Hove
POC Title	Lieutenant
POC Phone	515-204-7288
POC Email	hove@dps.state.ia.us
Time to Deploy (Hrs.)	
Deployment Method	☒ Driven ☐ Towed ☐ Conveyed ☐ Other
Description of Equipment	Diesel Generator
Notes	

Name	ISICSB Central STR Generator
Type	Diesel Generator
Responsible Agency	ISICSB
Location Kept	Central STR Trailer, Aurelia, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
POC Phone	515-725-6091
POC Email	nichols@dps.state.ia.us
Time to Deploy (Hrs.)	
Deployment Method	☒ Driven ☐ Towed ☐ Conveyed ☐ Other
Description of Equipment	Diesel Generator

Name	ISICSB East STR Generator
Type	Diesel Generator
Responsible Agency	ISICSB
Location Kept	East STR Trailer, Iowa City, IA in summer, Davenport, IA in winter
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
POC Phone	515-725-6091
POC Email	nichols@dps.state.ia.us
Time to Deploy (Hrs.)	
Deployment Method	☒ Driven ☐ Towed ☐ Conveyed ☐ Other
Description of Equipment	Diesel Generator

Name	ISICSB West STR Generator
Type	Diesel Generator
Responsible Agency	ISICSB
Location Kept	West STR Trailer, Des Moines, IA
Area will respond to	Statewide
24/7 Phone	515-725-3231
POC Name	Haley Nichols
POC Title	Statewide Interoperability Coordinator
POC Phone	515-725-6091
POC Email	nichols@dps.state.ia.us
Time to Deploy (Hrs.)	
Deployment Method	☒ Driven ☐ Towed ☐ Conveyed ☐ Other
Description of Equipment	Diesel Generator

Appendix M Strategic Technology Reserve (STR)

Appendix M-1 STR Summary

The State of Iowa has developed the STR; pre-positioned, interoperable communications assets that can restore basic communications when terrestrial communications are non-existent, or severely compromised. The STR consists of the following equipment:

Appendix M-1(a) East STR Trailer

Located at Iowa City, IA in the summer and Davenport, IA in the winter.

One 16 foot, fully enclosed trailer equipped with:

1 – 40-foot tower
36 – Harris Quad Band Portable Radios
1 – Harris Unity Mobile UHF/700/800 Quad Band XG-100M
1 – ACU5000
4 – ACU connection cables (2 for Harris Quad Band Radios and 2 un-terminated)
1 – Harris Master III 800 MHz Repeater (SX8MCXE)
1 – Diesel generator with 48-hour fuel supply

Appendix M-1(b) Central STR Trailer

Located at Aurelia, IA

One 16 foot fully enclosed trailer equipped with:

1 – 40-foot tower
9 – Motorola APX6000 UHF Single Band Portable Radios
23 – Harris P7350 UHF Dual Band Portable Radios
4 – Harris Unity UHF/7-800 Portable Radios XG-100P
1 – Harris Unity Mobile UHF/700/800 Tri Band XG-100M
1 – ACU5000
4 – ACU connection cables (1 for Motorola APX6000, 1 for Harris Quad Band, and 2 un-terminated)
1 – Harris Master III UHF Repeater (SXUMCX)
1 – Harris Master III 800 MHz Repeater (SX8MCXE)
1 – Diesel generator with 48-hour fuel supply

Appendix M-1(c) West STR Trailer

Located at Des Moines, IA.

One 16 foot fully enclosed trailer equipped with

1 – 40-foot tower

32 – Motorola APX6000 VHF Single Band Portable Radios

4 – Motorola APX7000 Dual Band Portable Radios

1 – Motorola APX7500 Dual Band Mobile Radio

1 – Motorola GTR8000 Mobile Repeater

Six-channel Motorola GTR trunking site configured to integrate with the Iowa Statewide Interoperable Communications System in site or wide area trunking.

1 – ACU5000

4 – ACU5000 connection cables (1 for APX7500, 1 for APX7000, 1 for APX6000, 1 for GTR8000)

1 – Diesel generator with 48-hour fuel supply

Appendix M-1(d) DSP Mobile Command

Located in Des Moines, IA.

LDV built custom vehicle that is driven and equipped with:

Four-channel Motorola GTR trunking site configured to integrate with the Iowa Statewide Interoperable Communications System in site or wide area trunking.

Zetron 9-1-1 call taking equipment connected to the state CPE and Shared Services

1 – Motorola MCC7500 console connected to the ISICS core

Diesel generator

Appendix M-2 STR Deployment Request

Appendix M-2(a) Request Form

Online: https://dps.iowa.gov/divisions/commissioners-office/interoperability-communications/isics-board/services

Iowa Strategic Technology Reserve Deployment Request

Type of Incident (Check one)	☐ Actual Incident	☐ Exercise/Training
Date of Request:		
Local Emergency Management Agency/State Agency making request:	Agency Contact name:	
	Agency Contact phone:	
	Agency Contact cell phone:	
	Agency Contact E-Mail:	
Asset Type Requested (check those needed)	☐ Mobile Communications Trailer Frequency Range Requested ☐ UHF ☐ VHF ☐ 800 MHz	☐ Mobile E911 Bus
Exact Location of Use:		
Type of Incident/Exercise:		
Start Date and Time:	End Date and Time:	
Designated Incident Communications Unit Leader (COML) if known:	COML Contact Phone:	
	COML Contact E-Mail:	
Designated Communications Technician (COMT) if known:	COMT Contact Phone:	
	COMT Contact E-Mail:	

Appendix M-2(b) Approval/Denial[3]

Exercise/Training	☐ Approved ☐ Denied	ISICS Board Chair Signature
	Date:	
Actual Incident	☐ Approved ☐ Denied	Iowa HSEMD Administrator Signature
	Date:	

[3] The request for deployment of an STR asset indicates acceptance of fiscal responsibility for the cost of any damaged or lost equipment. If the STR has been deployed as a state Homeland Security Team in accordance with Code of Iowa Chapter 29C.8(f), it is the responsibility of the Incident Commander to track all costs associated with the use of the STR.

Appendix N Emergency Wireless Carrier Services

Interoperable communication needs for response to many incidents and planned events can be handled with the coordinated response of local, regional, and state resources. However, other responses and events may require additional support, due to their location, scope, or other factors. Some national wireless carrier providers provide emergency response services and capabilities to meet these needs.

Appendix N-1 Information Required and Considerations for Requesting Deployable Wireless Support

- To avoid duplicate requests, requests should be routed through the State Emergency Operations Center (EOC), if activated, or with the Statewide Interoperability Coordinator (SWIC) and State Duty Officer.
- What are the communications needs?
- What issues or problems are you facing?
- Where is the coverage needed?
- What are the number of users and/or devices required?
- What will the devices be doing?
- What are the incident conditions, including environmental concerns and size of the incident?
- What is terrain and access?
- Is the roadway accessible?
- Height/weight restrictions, turning radius adequate?
- Will there be an escort required?
- Where is the desired site setup?
- Is the site secure?
- Is the site a level clear area with 100’ x 100’ minimum space with a southern view?

Appendix N-2 Typical Customer Support Request Information

Short Summary of Situation:

- Incident Name:
- Requesting Agency Name:
- Support Location Address or Lat/Long:
- Start Date:
- End Date:
- Location POC Name:
- Location POC Phone:
- Location POC Email (if available):
- Do you need Data:
    - Connection Type
        - Wired:
        - Wi-Fi:
            - Indoor Coverage:
                - Approx. Square feet:
            - Outdoor Coverage:
                - Approx. Square feet:
    - The approximate number of end users needing support:
        - Quantity Indoor:
        - Quantity Outdoor:

- Power Availability:
  - Commercial:
  - Generator (size):
- Do you need cellular coverage?
- Do you need devices?
  - Quantity:
  - Type:

Appendix N-3 Emergency Wireless Service Providers

Appendix N-3(a) FirstNet

Wireless Service Provider	24/7 Phone	Website
FirstNet	800-574-7000	www.firstnet.com

Appendix N-3(a-1) Services Offered

- Agencies subscribing to FirstNet services can request deployable support 24/7 for disasters, critical incidents, and planned events.
- Services provided at no cost to FirstNet subscriber agencies, including associated support costs (e.g., fuel, personnel, satellite airtime).
- More than 100 assets dedicated to FirstNet users, built with 4G LTE solutions, which are strategically distributed throughout the United States.
  - Satellite-connected Cells on Light Trucks (SatCOLTs)
  - Satellite Cells on Wheels (SatCOWs)
  - Emergency Communications Vehicles
  - FirstNet One (aerostat)
  - Compact Rapid Deployables (CRDs)
  - Mobile Deployment Kits
  - Cel-Fi Go Red Kits (FirstNet Cellular Signal Booster)

Appendix N-3(a-2) How do FirstNet Deployables work?

- Can provide several miles of coverage (dependent upon site conditions and terrain).
- Typically, radiates Band 14 for best public safety experience.
- Locked to the FirstNet Black SIM card.
- SatCOLTs and Sat COWs establish backhaul via satellite.
- Provide voice (including Voice over IP, VoLTE, data, location, and messaging.
- 14-hour window for arrival and operational status for emergent incident responses.
- 30-day notice required for planned events.
- Deployables are intended to support FirstNet users with FirstNet capable devices – not consumer cellular traffic.

Appendix N-3(a-3) How do you request a FirstNet Deployable?

- Call the 24/7 FirstNet Help Desk: 800-574-7000.
- Be prepared to provide your FAN (Foundation Account Number).
- Initial all information will be referred to the FirstNet Response Operations Group at AT&T who will process the request on behalf of AT&T.

Appendix N-3(a-4) FirstNet Central: Uplift Portal and Incident Management
www.firstnetcentral.firstnet.com

FirstNet Central is a web portal for FirstNet's public safety users and offers a collection of administrative tools, training resources, and operational tools on a single platform. FirstNet Central is designed to help public safety and emergency management entities with increased situational awareness, identify potential impact to operations, and guide decisions on use of resources.

The Network Status Map, including an Advanced Network View, provides FirstNet public safety users the ability to view the status of the network, and offers additional information and features that can be customized by the user including the ability to view cell site level detail. Users can subscribe to receive alerts for unplanned network outages via text, e-mail, or push notification to the FirstNet Assist app.

The Uplift Request Tool can be used by designated Uplift Managers to temporarily raise the tier of a FirstNet device (any device provisioned with a FirstNet SIM) to grant all three benefits of Quality of Service, Priority, and Preemption (QPP) or "First Priority" Through the Uplift Request Tool, FirstNet Extended Primary users (e.g., public works, utilities, debris removal, etc.) can be temporarily elevated when supporting first responders is critical, granting them the same levels of QPP experienced by Primary users. Uplift requests can be created and launched immediately, or they can be scheduled up to one year in advance for a planned event.

Appendix N-3(a-5) FirstNet Assist App
www.firstnet.com/apps/featured-apps/firstnet-assist.html

FirstNet Assist is a free mobile app for Apple iOS or Android that is used to access or interact with different elements of FirstNet Central. The FirstNet Assist app is accessed using the same login as FirstNet Central Users can check the app to see if there are any Uplift Incidents tied to the incident or event they are responding to, and request to have their device uplifted if desired.

The FirstNet mission is to deploy, operate, maintain, and improve the only high-speed, nationwide wireless broadband network dedicated to public safety. FirstNet is constantly expanding and evolving network with investments focused on meeting current and future mission-critical requirements of public safety.

The First Responder Network Authority has entered a 25-year public-private partnership with AT&T. AT&T brings a proven track record and strong commitment to public safety, as well as the commercial expertise and nationwide resources to deploy, maintain and operate the network.

Appendix N-3(b) T-Mobile

Wireless Service Provider	24/7 Phone	Email
T-Mobile Emergency Response Team	Dedicated Support Line 888-639-0020 GETS Users 254-295-2220	ERTRequests@T-Mobile.com

A-1.1(a) Services Offered

- Mobile infrastructure for cellular service – Cells on Wheels (COWS), Cells on Light Trucks (COLTs), Satellite-connected Cells on Light Trucks (SatCOTs), and Small Cell solutions.
- Satellite-connected deployables – VSAT (Satellite Antenna), Satellite IP Trailers
- Mobile Command Trailers
- Satellite performance up to 45 Mbps downlink x 10 Mbps Wireline Connection (Ethernet).
- Commercial Wi-Fi
- Basic Phones, Smartphones, and Hotspots
- CradlePoint Routers
- Mutualink Interoperability solution

Appendix N-3(c) Verizon

Wireless Service Provider	24/7 Phone	Email
Verizon Response Team	Support Line 800-981-9885	www.Verizon.com/business/solutions/public-sector/public-safety/programs/Verizon-response-team/

A-1.1(b) Services Offered

- Mobile communications equipment – Cells on Wheels (COWs), Cells on Light Trucks (COLTs) and Satellite Picocell on trailers.
- Satellite-connected deployables – VSAT (Satellite Antenna), Satellite IP Trailers.
- Rugged deployables – Purpose-built, weatherproof, military grade with a built in 4G LTE solution that combines high-power charging mAh battery.
- Drones – UAS 107 Licensed Drone Program across the U.S. that provides situational awareness during an event.
- Loaner phones and data devices.
- Enterprise-grade 4G LTE routers with directional antenna solutions.
- Emergency communication and charging centers.
- Pre-event planning and site assessments.
- Verizon Security Assistance Team support – missing persons/search and rescue

US Cellular (USCC)

Wireless Service Provider	24/7 Phone	Email
USCC Response Team	Support Line	UCSS Contact email or URL

A-1.1(c) Services Offe ed

- Add capabilities hei e.

Additional notes here.

Appendix O Communications Resources Best Practices and General Procedures

Appendix O-1 General Procedures

Appendix O-1(a) Usage

For all incidents, the following guidelines should be observed:

National Incident Management System (NIMS) – Use an Incident Command System (ICS) compliant with NIMS when using any regional interoperability resource.

Plain Language – All interoperable communications during multi-agency, multi-discipline incidents will be in plain language/text. Avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.

Unit Identification – Announce your home agency prior to announcing your unit identifier during interoperable communication situations. On the Iowa Statewide Interoperable Communications System (ISICS), communication should follow ISICS Standard 1.3.0 - Statewide Interoperable Plain Language Policy.

After Action Plan/Hotwash - Agencies should complete an After-Action Report/Improvement Plan after any incident and/or exercise.

Appendix O-1(b) Communications Resource Request Procedure

The agency requesting the use of a fixed or mobile gateway device for incident/event communications support should document and provide the following information to the owning gateway agency point of contact (POC), on request:

Requesting agency

Equipment required

Location required/access information

Expected duration of event

Incident/event type (e.g., flooding, etc.)

On-scene agencies requiring interoperability

Incident POC

User/requestor and/or servicing dispatch contact phone number

Additional support services requested (e.g., gateway THSP, generator, etc.)

Known hazard information

Appendix O-1(c) Problem Identification and Resolution

During an incident:

Report shared system problems to the incident dispatch supervisor/Communications Unit Leader (COML)/or their designee assigned to the incident/event who will follow established agency procedures to resolve the problem.

Following an incident:

Report any problems with a shared system to the appropriate POC for the owning agency. The POC will be responsible for ensuring effective resolution to problems that exist with the shared system.

Inform the Iowa Statewide Interoperable Communications Board (ISICSB) about shared system problems and their identified solutions or outstanding issues. The ISICSB supports effective resolution to any remaining problems.

Appendix O-2 Resource-Specific Procedures

Appendix O-2(a) Shared Channels/Interoperability Repeater Requests

Use the following procedures when requesting, using, or discontinuing the use of shared communications systems:

Step 1 – Once it is identified that interoperability is needed, the incident commander or designee will contact the << IDENTIFY>> using any of the following methods:

Via telephone at <<XXX-XXX-XXXX>

Step 2 – The caller will need to follow the procedure below:

Identify his or her title, name, agency, and callback number.

Describe the communication needs (e.g., "We need a command-and-control channel;" "We need an 800 MHz agency interconnected to a VHF agency.")

Step 3 – << Central Dispatch>> will verify the needs and reserve/assign/activate the appropriate channels/talkgroups for the incident via StatusBoard.

Step 4 – If any additional communications resources are needed repeat Steps 1 through 3, as necessary.

Step 5 – Once the incident is completed, contact <<Central Dispatch>> and request the termination of the incident interoperability resources.

For extended incidents:

The lead agency dispatcher notifies the COML/or their designee that interoperability channels are in use. The COML/or their designee incorporates any interoperable communications assignments into the Incident Radio Communications Plan (ICS Form 205). Any channel or talkgroup used in an ICS-205 must be reserved on StatusBoard.

Each agency's dispatcher relays interoperable channel assignments to additional responding personnel/resources.

Incident or Unified Command determines when the interoperability channels are no longer required and notifies the COML/or their designee. Any reservations on StatusBoard should be removed at that time.

Appendix O-2(b) Conventional Interoperability Base Station/Repeaters

Conventional Interoperability Repeater Best Practices

Proper operation of repeater stations is necessary for the efficient use of the conventional interoperability channels, and especially to minimize potential interference.

Only the minimum number of calling channel repeaters should be active in the region.

Interoperability repeaters should be in "Repeater Off" or "Standby" if interference is possible.

If possible, configure tactical repeaters to default to "Repeater Off" or "Standby" in the event of a power cycle or other disruption.

Agencies should periodically check their repeaters to make sure they are in Repeater Off mode to prevent interference to other agencies.

Having multiple repeaters active on the same frequency in the same area causes the mobile and portable radio users to hear interference from multiple repeaters.

Dispatch centers using direct repeater control normally cannot hear other active repeaters on their consoles unless they also have a monitor radio on that channel. They will hear the input channel from any mobile, portable, or control stations from any agency within range of their repeaters.

Calling Channels

Agencies controlling interoperability repeaters should monitor the Calling Channels for requests for repeater activation or other assistance.

Tactical Channels

Tactical Channels are used for incident communications.

Interoperability repeaters should be in “Repeater Off” or “Standby” mode if interference is possible.

In general, the tactical channel repeater that is closest to the incident and provides the minimum effective coverage area for the incident should be used. This allows greater reuse of frequencies for multiple incidents across the region.

Appendix O-2(c) Gateways

Gateway Limitations

Interoperability provided through a gateway can connect participating agency responders but has the following limitations:

The COML and/or Incident Commander or their designee must be aware that activating multiple gateways to support an incident could result in mutual interference. Interference issues are best resolved by the technical support team or Communications Technician (COMT) assigned to the gateways.

The number of simultaneous patches that can be supported by the gateway will be limited by switch capacity and the number of lines connecting control centers and consoles. As a result, a limited number of patches involving resources at different control points can be supported simultaneously. Likewise, 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 for repeated channels or talkgroups. Users patched through a gateway must be within the radio frequency (RF) footprint of their coverage area.

Agencies and/or channels not permanently configured on a given gateway will require additional planning to establish interoperable communications through that gateway.

All system functionalities may not be supported in a gateway environment (e.g., emergency button, user ID displays, etc.).

Gateway Specific Policies and Procedures

The following additional policies and procedures shall govern interoperable communications between agencies via gateways:

Encryption – All encrypted radio users must operate in a “clear” mode when a gateway is used, unless otherwise arranged in advance. Never assume encryption carries across the gateway.

Monitoring – The Incident Commander, or their designee, will ensure that each activated patch is monitored consistently while in use.

Technical Support – Qualified gateway technical specialists (THSPs) or COMTs must be available for on-scene support during the deployment of mobile gateways.

Gateway Activation Procedures

Procedures for establishing communications connectivity are:

Select a channel or talkgroup on the home system for use in the patch and reserve that channel or talkgroup in StatusBoard.

Verify the system-wide availability of required resources (coordinate among control point dispatchers).

Test functionality of patch.

Provide radio call sign/designator information to connected agencies as needed.

Assign the requested unit/agency to that channel or talkgroup.

Connect the agency to the appropriate talkgroup.

Announce to users that the gateway is activated.

Identify users on the interoperability channel using their agency name and unit identifier through a roll call.

Monitor the interoperability channel to address requests or troubleshoot issues that arise.

Gateway Deactivation Procedures

When the gateway connections are no longer required, agencies should follow these deactivation procedures:

Confirm that there are no users still requiring use of the gateway prior to deactivation.

Contact the monitoring dispatcher (for fixed gateways) or the gateway THSP/COMT (for mobile gateways) to request patch/gateway deactivation.

Announce over all patched channels/talkgroups that connections will be deactivated prior to the connection being disabled.

Return all personnel to their appropriate home system channel assignments.

When applicable, have Dispatchers or designee conduct a roll call to ensure the patched channels/talkgroups are clear.

Any reservations on StatusBoard should be cancelled.

Gateway Test Procedures

To ensure that equipment components of the gateway operate properly, each agency will participate in the following testing procedure:

Representatives from multiple agencies should meet on a regular basis to test each gateway.

Testing should include deployment (mobile only), setup, operation, and deactivation of each gateway.

If an issue or problem is identified during the testing procedure, determine who will take corrective action. If the issue or problem cannot be resolved, contact the appropriate technical personnel to address the issue or problem.

Appendix O-2(d) Mobile Repeaters

Mobile Repeater Limitations

The COML and/or Incident Commander must be aware that activating multiple repeaters on the same frequencies/channels to support an incident can result in mutual interference. Interference issues are best resolved by the technical support team assigned to the repeaters.

Mobile Repeater Deployment Procedures

Upon receiving a request for the deployment of a repeater, the owning agency dispatcher should follow these deployment procedures:

Contact the on-call repeater THSP/COMT responsible for repeater deployment.

Dispatch the THSP/COMT to the incident scene.

Inform the requesting agency that the repeater is enroute and provide an estimated time of arrival (ETA), if available.

The repeater THSP/COMT should follow these deployment procedures:

Provide dispatch with an ETA at the incident and method of communications while enroute (e.g., designated radio channel, cell number).

Retrieve the repeater from its storage location and deliver it to the incident scene.

Report to the COML or their designee or to Check-in on arrival.

Once on-scene, install and activate the repeater in accordance with the Mobile Repeater Activation Procedures listed below.

Mobile Repeater Activation Procedures

The COML or their designee will:

Select a channel or channel pair for use in the repeater.

Verify the system-wide availability of required resources (coordinate among control point dispatchers).

Coordinate with the repeater technician the installation location for the repeater.

Announce to the requesting agency when the repeater is operational.

The repeater THSP/COMT will:

Install the repeater in accordance with standard safety protocols.

Notify the COML or their designee when the repeater is operational.

Prior to moving units to the newly activated repeater channel, perform on-site coverage tests to confirm that the repeater is providing adequate coverage for the incident.

Continually monitor the repeater to ensure continued operation without degradation.

Mobile Repeater Deactivation Procedures

When the repeater(s) is (are) no longer required, agencies should follow these deactivation procedures:

Contact the repeater THSP/COMT to request repeater deactivation.

Announce over the repeater that it will be deactivated prior to disabling it.

Direct all personnel to their appropriate home system channel assignments.

When applicable, have Dispatchers or designee conduct a roll call to ensure the channel/talkgroup is clear.

Mobile Repeater Test Procedures

To ensure that equipment components of the mobile repeater operate properly, each agency should participate in the following testing procedure:

Representatives from the owning agencies should test each repeater on a regular basis.

Testing should include deployment, setup, operation, and deactivation of each repeater.

If an issue or problem is identified during the testing procedure, determine the appropriate corrective action. If the issue or problem cannot be resolved, contact the appropriate technical personnel to address the issue or problem.

Appendix O-2(e) Radio Caches

Radio Cache Policies and Procedures

The following additional policies and procedures apply to establishing interoperable communications between agencies via radio caches:

Programming – All cache radios in the region must be programmed in accordance with regional programming guidance appropriate to their make, model, type, and frequency band.

Charging – Cache radios must be fully charged and ready for immediate deployment when requested. Deployed equipment includes extra batteries and/or battery chargers to support extended deployments.

Radio Identification – Each radio in a radio cache will have a unique identification number (e.g., serial number, etc.) for inventory tracking.

Technical Support – Qualified radio cache THSPs or COMTs may be available for on-scene support during the deployment if the requesting agency cannot act in this capacity.

Equipment Return – The requesting agency is responsible for the return of any cache radios/equipment in the condition that they were received.

Radio Cache Programming Requirements

Radio programing before an incident is a critical component to interoperability. Requirements for programming of cache radios is defined in ISICS Standard -1.7.0 – Minimum Programming Requirements and the ISICSB MC-12B policy. Regularly deployed radios in the field should also be programmed with these talkgroups and frequencies according to their capabilities.

Radio Cache Deployment Procedures

Upon receiving a request for the deployment of a radio cache, the owning agency dispatcher should follow these deployment procedures:

Contact the on-call THSP/COMT responsible for radio cache deployment.

Dispatch the radio cache THSP to the incident scene.

Inform the requesting agency that the radio cache is enroute and provide an ETA, if available.

The radio cache THSP/COMT should follow these deployment procedures:

Provide dispatch with an ETA at the incident and method of communications while enroute (e.g., designated radio channel, cell number).

Retrieve the radio cache from its storage location and deliver it to the incident scene.

Report to the COML or their designee or to Check-in on arrival.

Sign the cache over to the requesting agency for incident use or, if assigned to remain on scene, coordinate radio cache deployment procedures with the Communications Unit.

Radio Cache Distribution Procedures

The requesting COML or their designee will:

Support radio deployments on-scene.

Before deploying/issuing cache radios, have COMT/THSP confirm they are correctly programmed with the applicable channels/talkgroups.

Maintain a record of each user and agency to which a radio and associated accessories have been distributed.

Document the identification number of each radio deployed.

Document the channels in use.

Provide a brief overview/introduction of the radio and the relevant portions of the communications plan (e.g., brief list of channel assignments, “cheat sheets,” etc.) to those receiving a cache radio.

Each user and/or agency that receives a radio from the radio cache will be responsible for returning that radio and all associated accessories to the cache at the end of the incident.

Radio Cache Demobilization Procedures

When the radio cache is no longer required, agencies should follow these demobilization procedures:

Return all cache radios and associated accessories to the COMU, when established, or to the COML/or their designee.

The COML/or their designee will:

Inventory all radios and accessories returned to the cache.

Determine if any radios or associated accessories have not been returned. Note the user and agency to which the missing radio/accessories were distributed. Provide this information to the Incident Commander or their designee.

If the missing radios cannot be recovered at the incident scene, provide this information to the radio cache POC for resolution.

Return all equipment is similar condition as deployed (e.g., remove any incident programming).

Appendix O-2(f) Mobile Communications Units (MCU)

MCU Policies and Procedures

The following additional policies and procedures apply to establishing interoperable communications between agencies via MCUs:

Equipment Return – The requesting agency is responsible for the return of any MCUs in the condition that they were received and/or as dictated by existing Memoranda of Agreement (MOAs).

Resource Modifications – The requesting agency is not allowed to change anything in the MCU without written permission of the owning agency.

Technical Support – Qualified MCU THSPs or COMTs must be available for on-scene support during the deployment of MCUs.

MCU Deployment Procedures

Upon receiving a request for the deployment of an MCU, the owning agency dispatcher should follow these deployment procedures:

Contact the on-call MCU THSP/COMT responsible for MCU deployment.

Determine the availability of the resource to fulfill the request.

Dispatch the MCU THSP/COMT to the incident scene, if available.

Inform the requesting agency that the MCU is enroute and provide an ETA, if available.

The MCU THSP/COMT should follow these deployment procedures:

Provide dispatch with an ETA at the incident and method of communications while enroute (e.g., designated radio channel, cell number).

Retrieve the MCU from its storage location and deliver it to the incident scene.

Report to the COML/or their designee or to Check-in on arrival.

Prepare the MCU for operations and, if assigned to remain on scene, supervise its use.

MCU General Activation Procedures

When the MCU arrives on the scene, the MCU THSP/COMT will coordinate the placement of the MCU with the IC or their designee. The MCU THSP/COMT and IC will cooperatively determine the best placement of the MCU to support the incident.

The MCU THSP/COMT will activate systems needed and brief all personnel using the MCU on the operation and safety procedures.

Each Agency is encouraged to develop an Operations Manual to cover the startup, use, and shut down of the MCU and each system included.

General MCU General Deactivation Procedures.

When the MCU is no longer required, agencies should follow these deactivation procedures prior to demobilizing the MCU:

- Inventory all MCU equipment before leaving the incident scene to determine if equipment is accounted for. Provide this information to the Incident Commander/designee.
- Properly configure the MCU for mobilization, ensuring that all equipment is stowed and secured.

Appendix P Best Practices Self-Assessment Checklist

The Best Practices Checklist can be used by agencies to self-assess their interoperable communications capabilities and preparedness. The checklist is divided into major topic sections.

Appendix P-1 Administrative

☐ Agency maintains a communications plan and/or participates in a region-based communications plan for interoperability and cross-jurisdictional response.

☐ The agency has designated and documented the following:

- ☐ One or more Communications Unit (COMU) staff (e.g., Communications Technician (COMT), Communications Unit Leader (COML), etc.) to provide communications support as needed during an incident or event, or in support of a cross-jurisdictional response.
- ☐ Point of Contact (POC) for interoperable communications
- ☐ Individual(s) or roles with the authority to request or release communications resources.
- ☐ Critical incident notification procedures
- ☐ Process for the distribution and availability of interoperable communications plans
- ☐ Maintains a procedure to provide version control of the plan document.
- ☐ Review period for communications plans
- ☐ Continuity of Operations Plan (COOP) for loss of dispatch facility or communications infrastructure
- ☐ Cross-jurisdictional response plans include:
  - ☐ Coordination with designated state and/or regional interoperable communications staff for resource requests, deployments and deconfliction of resource and channel utilization
  - ☐ Applicable Memoranda of Agreement(s)/Understanding(s) if any
  - ☐ Authorization and conditions for automatic response
  - ☐ Indemnification against liability
  - ☐ Management of equipment damage or loss, or injury of agency personnel
  - ☐ Cost recapture for equipment or personnel costs if any

Appendix P-2 Technical/Equipment

Radio Programming

- ☐ Channels and talkgroups have consistent names and are programmed in all appropriate communications equipment.
  - ☐ Channel and talkgroup names conform to accepted naming standards.
- ☐ Agency radios are programmed alike where appropriate (radio programming inconsistencies are identified).
- ☐ Radio programming includes applicable interop channels and talkgroups as identified in the National Interoperability Field Operations Guide (NIFOG) and local communications interoperability plan.
- ☐ Radio equipment is tested and aligned on a regular basis.
- ☐ Software based radio systems are maintained to the last stable software version and firmware.

Trunked Radio Systems

- ☐ Recommended minimum and desired hardware and feature requirements are defined, documented and available to appropriate agencies.
- ☐ The trunked system fleetmap is maintained as the primary source for talkgroup configuration, programming, and provisioning.

Systems and Technology

- ☐ Software and firmware updates on data communications systems infrastructure such as routers are maintained to the last stable version.
- ☐ Software and firmware updates on computer servers, desktop computers, laptops and handheld devices are maintained to the last stable version where applicable.
- ☐ Antivirus and anti-malware applications and versions are maintained on all computer equipment.
- ☐ There is a lifecycle plan for upgrade or replacement of technology-based equipment.

Appendix P-2(a) Operational

Agency

- ☐ The agency has adopted National Incident Management System (NIMS) Incident Command System (ICS) as the organizational framework for both local and cross-jurisdictional incident response and deployment.
- ☐ Available communications resources are identified and documented.
- ☐ There is a prescribed process for requesting resources.
- ☐ One or more individuals or staff roles with the authority to request communications resources are identified.
- ☐ There is a procedure identified for responding to an incident upon request.
- ☐ There is a procedure identified for the coordination of resources with other agencies during multi-jurisdictional events.
- ☐ After-action reviews are conducted and documented following any significant deployment of interoperability resources.

Dispatch

- ☐ Interoperability calling channels are continuously monitored in dispatch.
- ☐ Interoperability channels are tested on a regular basis to ensure operability and maintain user awareness of proper operation.
- ☐ Telecommunicator training and staffing are established to ensure that interoperable communications resources can be deployed and/or activated at any time.
- ☐ Dispatch has a formal notification procedure for incident response and/or resource activation requests.

Appendix P-2(b) Staff/Personnel

Knowledge, Skills, and Abilities

See https://isicsb.iowa.gov (resources – standards) for Iowa Statewide Interoperable Communications System (ISICS) standards.

- ☐ Field personnel can demonstrate proficiency in operating issued radio equipment, including identification and selection of interoperability channels and/or talkgroups.

- ☐ A member of the Public Safety Answering Point (PSAP) staff can demonstrate proficiency in operation of facility resources and equipment, including:
  - ☐ Location and purpose of communications plan
  - ☐ Identification and selection of interoperability channels and/or talkgroups
  - ☐ Activation and deactivation of console patches and interoperability repeaters where applicable

Training and Exercise

- ☐ Interoperability training is conducted on a regional basis to ensure consistency.
- ☐ Interoperability approach should be reviewed on a recurring basis.
- ☐ The agency incorporates NIMS-ICS and Interoperable Communications in the agency training program.
- ☐ Communications and communications proficiency training are incorporated in the agency training program.
  - ☐ Preliminary recruit and field training
  - ☐ Dispatcher and Communications Supervisor training
  - ☐ Reentry training
  - ☐ Continuing training programs
- ☐ Regularly scheduled roll call checks are conducted on interoperable channels and talkgroups.
- ☐ All drills, exercises and incident planning include a communications component.
- ☐ Interoperable communications tabletop and/or functional exercises are conducted on a regular basis.
  - ☐ Exercises to include administrative, field, supervisory and dispatch personnel.
  - ☐ Exercise evaluations and after-action reports are developed after each exercise.
  - ☐ Improvement plans are developed and implemented as needed.

Appendix P-3 Best Practices, Considerations and Factors

- Does your agency have a process for the transfer of knowledge when staff changes?
- How are other agencies incorporated in your agency's interoperability plan?
- Consider implementations based on open standards and not proprietary systems.
- Are amateur radio resources underutilized in your agency's area?
- Utilize the strength of personal and professional relationships to promote inter agency cooperation and planning efforts.
- How do can your agency resolve the disconnect between operational knowledge and technical expertise?
- Does your agency cultivate operational people who want to understand communications?
- Does your agency maintain a complete list of your agency's communications capabilities, including radio programming and channel information?
  - Can your communications vendor provide you with this information?
- Does your agency routinely include communications in event planning, training, and exercise programs?

Appendix Q Reference Materials

Reference Sources

- *Iowa Statewide Interoperable Communications System Standards* https://isicsb.iowa.gov
  All standards related to the operation of ISICS can be found at the above link.
- *Cybersecurity and Infrastructure Security Agency (CISA) - SAFECOM*
  https://www.dhs.gov/safecom

  CISA maintains a website containing several tools, resources, and training opportunities for public safety communications professionals. This website provides members of the emergency response community and other stakeholders with resources created by SAFECOM and its partner organizations to improve public safety interoperability. It offers comprehensive information on topics relevant to emergency response communications and features best practices that have evolved from real-world situations.

  Resource links available through the SAFECOM site include:

  - Communications Assets Survey and Mapping Tool (CASM) - offered by the Cybersecurity & Infrastructure Security Agency - https://www.cisa.gov . CASM is the primary resource nationwide for the emergency communications community to inventory and share agency, asset, and COMU information, for the purpose of planning public safety communications operability and interoperability.
  - Communications Unit (COMU) Guidance - provides information and training resources on the COMU.
  - Public Safety Software Tools - provides no cost online software applications that promote collaborative public safety communications planning and response.
  - Model Standard Operating Procedures (SOPs) – Recommended bets practices for the development of formal, written guidelines or instructions for incident response that typically have both operational and technical components. The resources provided in this section will guide you through how to build SOPs to help coordinate incident response.
  - eAUXFOG Mobile App - a technical reference for Auxiliary Communicators supporting public safety emergency communications planning and response.
  - eNIFOG Mobile App – Mobile version of the *National Interoperability Field Operations Guide* (NIFOG). a collection of technical, operational, and regulatory reference material for radio technicians responsible for radios that can be used in disaster response applications, and for emergency communications planners.
  - The *National Emergency Communications Plan* (NECP) is a strategic plan that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises, and disaster communications capabilities. The NECP provides recommendations, including milestones, to help emergency response providers and relevant government officials make measurable improvements in emergency communications over the next three years.
- *Federal Emergency Management Agency (FEMA).* http://www.fema.gov
  - The Department of Homeland Security *Target Capability List* (TCL) describes the capabilities related to the four homeland security mission areas: Prevent, Protect, Respond, and Recover. It defines and provides the basis for assessing preparedness. It also establishes national guidance for preparing the Nation for major all-hazards events, such as those defined by the National Planning Scenarios.

- Incident Command System (ICS) Forms - website links and a table that describes the forms that may be used *during* an incident for ICS planning.
  - Word-fillable forms on FEMA website: EMI - ICS Fillable Forms (fema.gov)
  - ICS Forms are available from the FEMA ICS Resource Center website: https://training.fema.gov/emiweb/is/icsresource/icsforms/
  - Older versions of ICS Forms are available on the National Wildfire Coordinating Group (NWCG) website: https://www.nwcg.gov/publications/ics-forms.

ICS FORM	DESCRIPTION
ICS Form 201 Incident Briefing	**Purpose:** The Incident Briefing form provides the Incident Commander (and the Command and General Staffs assuming command of the incident) with basic information regarding the incident situation and the resources allocated to the incident. It also serves as a permanent record of the initial response to the incident. **Preparation:** The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing. **Distribution:** After the initial briefing of the Incident Commander and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistic Section Unit Leaders.
ICS Form 202 Incident Objectives	**Purpose**: The Incident Briefing (ICS 201) provides the Incident Commander (and the Command and General Staffs) with basic information regarding the incident situation and the resources allocated to the incident. In addition to a briefing document, the ICS 201 also serves as an initial action worksheet. It serves as a permanent record of the initial response to the incident. **Preparation**: The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing. **Distribution**: Ideally, the ICS 201 is duplicated and distributed before the initial briefing of the Command and General Staffs or other responders as appropriate. The "Map/Sketch" and "Current and Planned Actions, Strategies, and Tactics" sections (pages 1–2) of the briefing form are given to the Situation Unit, while the "Current Organization" and "Resource Summary" sections (pages 3–4) are given to the Resources Unit.
ICS Form 203 Organization Assignment List	**Purpose**: The Organization Assignment List (ICS 203) provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the Incident Organization Chart (ICS 207) which is posted on the Incident Command Post display. An actual organization will be incident or event specific. Not all positions need to be filled. Some blocks may contain more than one name. The size of the organization is dependent on the magnitude of the incident and can be expanded or contracted, as necessary. **Preparation**: The Resources Unit prepares and maintains this list under the direction of the Planning Section Chief. Complete only the blocks for the positions that are being used for the incident. If a trainee is assigned to a position, indicate this with a "T" in parentheses behind the name (e.g., "A. Smith (T)"). **Distribution**: The ICS 203 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

ICS FORM	DESCRIPTION
ICS Form 204 Assignment List	**Purpose**: The Assignment List(s) (ICS 204) informs Division and Group supervisors of incident assignments. Once the Command and General Staffs agree to the assignments, the assignment information is given to the appropriate Divisions and Groups. **Preparation**: The ICS 204 is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202), Operational Planning Worksheet (ICS 215), and the Operations Section Chief. It must be approved by the Incident Commander but may be reviewed and initialed by the Planning Section Chief and Operations Section Chief as well. **Distribution**: The ICS 204 is duplicated and attached to the ICS 202 and given to all recipients as part of the Incident Action Plan (IAP). In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms must be given to the Documentation Unit.
ICS Form 205 Incident Radio Communications Plan	**Purpose**: The Incident Radio Communications Plan provides in one location information on all radio frequencies assignments for each operational period. The plan is a summary of information obtained from the Radio Requirement Worksheet (ICS Form 216) and the Radio Frequency Assignment Worksheet (ICS Form 217). Information from the Radio Communications Plan on frequency assignment is normally placed on the appropriate Assignment List (ICS Form 204). **Preparation**: The Incident Radio Communications Plan is prepared by the COMU Leader and given to the Planning Section Chief. **Distribution**: The Incident Radio Communications Plan is duplicated and given to all recipients of the Incident Objectives form including the Incident Communications Center. Information from the plan is placed on Assignment List.
ICS Form 206 Medical Plan	**Purpose**: The Medical Plan (ICS 206) provides information on incident medical aid stations, transportation services, hospitals, and medical emergency procedures. **Preparation**: The ICS 206 is prepared by the Medical Unit Leader and reviewed by the Safety Officer to ensure ICS coordination. If aviation assets are utilized for rescue, coordinate with Air Operations. **Distribution**: The ICS 206 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). Information from the plan pertaining to incident medical aid stations and medical emergency procedures may be noted on the Assignment List (ICS 204). All completed original forms must be given to the Documentation Unit.
ICS Form 207 Incident Organization Chart	**Purpose**: The Incident Organization Chart (ICS 207) provides a visual wall chart depicting the ICS organization position assignments for the incident. The ICS 207 is used to indicate what ICS organizational elements are currently activated and the names of personnel staffing each element. An actual organization will be event specific. The size of the organization is dependent on the specifics and magnitude of the incident and is scalable and flexible. Personnel responsible for managing organizational positions are listed in each box as appropriate. **Preparation**: The ICS 207 is prepared by the Resources Unit Leader and reviewed by the Incident Commander. Complete only the blocks where positions have been activated, and add additional blocks as needed, especially for Agency Representatives and all Operations Section organizational elements. For detailed information about positions, consult the NIMS ICS Field Operations Guide. The ICS 207 is intended to be used as a wall-size chart and printed on a plotter for better visibility. A chart is completed for each operational period and updated when organizational changes occur. **Distribution**: The ICS 207 is intended to be wall mounted at Incident Command Posts and other incident locations as needed and is not intended to be part of the IAP. All completed original forms must be given to the Documentation Unit.

ICS Form 209 Incident Status Summary	**Purpose**: The ICS 209 is used for reporting information on significant incidents. It is not intended for every incident, as most incidents are of short duration and do not require scarce resources, significant mutual aid, or additional support and attention. The ICS 209 contains basic information elements needed to support decision making at all levels above the incident to support the incident. Decision makers may include the agency having jurisdiction, but also all multiagency coordination system (MACS) elements and parties, such as cooperating and assisting agencies/organizations, dispatch centers, emergency operations centers, administrators, elected officials, and local, tribal, county, State, and Federal agencies. Once ICS 209 information has been submitted from the incident, decision makers and others at all incident support and coordination points may transmit and share the information (based on its sensitivity and appropriateness) for access and use at local, regional, State, and national levels as it is needed to facilitate support. **Preparation**: When an Incident Management Organization (such as an Incident Management Team) is in place, the Situation Unit Leader or Planning Section Chief prepares the ICS 209 at the incident. On other incidents, the ICS 209 may be completed by a dispatcher in the local communications center, or by another staff person or manager. This form should be completed at the incident or at the closest level to the incident. The ICS 209 should be completed with the best possible, currently available, and verifiable information at the time it is completed and signed. This form is designed to serve incidents impacting specific geographic areas that can easily be defined. It also has the flexibility for use on ubiquitous events, or those events that cover extremely large areas and that may involve many jurisdictions and ICS organizations. For these incidents, it will be useful to clarify on the form exactly which portion of the larger incident the ICS 209 is meant to address. For example, an ICS 209 submitted during a statewide outbreak of mumps may be relevant only to mumps-related activities in Story County, Iowa. This can be indicated in both the incident name, Block 1, and in the Incident Location Information section in Blocks 16–26. While most of the "Incident Location Information" in Blocks 16–26 is optional, the more information that can be submitted, the better. Submission of multiple location indicators increases accuracy, improves interoperability, and increases information sharing between disparate systems. Preparers should be certain to follow accepted protocols or standards when entering location information, and clearly label all location information. As with other ICS 209 data, geospatial information may be widely shared and utilized, so accuracy is essential. If electronic data is submitted with the ICS 209, do not attach, or send extremely large data files. Incident geospatial data that is distributed with the ICS 209 should be in simple incident geospatial basics, such as the incident perimeter, point of origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. Any attached data should be clearly labeled as to format content and collection time and should follow existing naming conventions and standards. **Distribution**: ICS 209 information is meant to be completed at the level as close to the incident as possible, preferably at the incident. Once the ICS 209 has been submitted outside the incident to a dispatch center or MACS element, it may subsequently be transmitted to various incident supports and coordination entities based on the support needs and the decisions made within the MACS in which the incident occurs. Coordination with public information system elements and investigative/intelligence information organizations at the incident and within MACS is essential to protect information security and to ensure optimal information sharing and coordination. There may be times in which ICS 209s contain sensitive information that should not be released to the public (such as information regarding active investigations, fatalities, etc.). When this occurs, the ICS 209 (or relevant sections of it) should be labeled appropriately, and care should be taken in distributing the information within MACS. All

ICS FORM	DESCRIPTION
	completed and signed original ICS 209 forms MUST be given to the incident's Documentation Unit and/or maintained as part of the official incident record.
ICS Form 211 Incident Check-In List	**Purpose**: Personnel and equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information, which is recorded on the Check-In List (ICS 211). The ICS 211 serves several purposes, as it: (1) records arrival times at the incident of all overhead personnel and equipment, (2) records the initial location of personnel and equipment to facilitate subsequent assignments, and (3) supports demobilization by recording the home base, method of travel, etc., for resources checked in. **Preparation**: The ICS 211 is initiated at any of the following incident locations: Staging Areas, Base, and Incident Command Post (ICP). Preparation may be completed by: (1) overhead at these locations, who record the information and give it to the Resources Unit as soon as possible, (2) the Incident Communications Center Manager located in the Communications Center, who records the information and gives it to the Resources Unit as soon as possible, (3) a recorder from the Resources Unit during check-in to the ICP. As an option, the ICS 211 can be printed on colored paper to match the designated Resource Status Card (ICS 219) colors. The purpose of this is to aid the process of completing a large volume of ICS 219s. The ICS 219 colors are: • 219-1: Header Card – Gray (used only as label cards for T-Card racks) • 219-2: Crew/Team Card – Green • 219-3: Engine Card – Rose • 219-4: Helicopter Card – Blue • 219-5: Personnel Card – White • 219-6: Fixed-Wing Card – Orange • 219-7: Equipment Card – Yellow • 219-8: Miscellaneous Equipment/Task Force Card – Tan • 219-10: Generic Card – Light Purple **Distribution**: ICS 211s, which are completed by personnel at the various check-in locations, are provided to the Resources Unit, Demobilization Unit, and Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident.
ICS Form 213 General Message	**Purpose**: The General Message form is used by: • Incident dispatchers to record incoming messages which cannot be orally transmitted to the intended recipients. • Command Post and other incident personnel to transmit messages to the Incident Communications Center for transmission via radio or telephone to the addressee. • Incident personnel to send any message or notification to incident personnel which required a hard copy delivery. **Initiation of the Form**: The General Message form may be initiated by incident dispatchers and any other personnel on an incident. **Distribution**: Upon completion, the General Message may be: • Hand carried to the addressee. • Hand carried to the incident Communications Center for transmission.

ICS FORM	DESCRIPTION
ICS Form 214 Activity Log	**Purpose**: The Unit Log is used to record details of unit strike team activity. The files of these logs provide a basic reference to extract information for inclusion in an after-action report. **Preparation**: A Unit Log is initiated and maintained by Command Staff members, Division/Group Supervisors, Air Operations Group/Strike Team/Task Force Leaders, and Unit Leaders. Completed logs are forwarded to supervisors who provide to the Documentation Unit. **Distribution**: The Documentation Unit maintains a file of all Unit Logs. It is necessary that one copy of each log be submitted to the Documentation Unit.
ICS Form 217A Communications Resource Availability Worksheet	**Purpose**: The Radio Frequency Assignment Worksheet is used by the COMU Leader to assist in determining frequency allocation. **Preparation**: Cache radio frequencies available to the incident are listed on the form. Major agency frequencies assigned to the incident should be added to the bottom of the worksheet. **Distribution**: The worksheet, prepared by the Communications Unit, is for internal use.
ICS Form 218 Support Vehicle/Equipment Inventory	**Purpose**: The Support Vehicle/Equipment Inventory (ICS 218) provides an inventory of all transportation and support vehicles and equipment assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles and equipment on the incident. The Resources Unit uses the information to initiate and maintain status/resource information. **Preparation**: The ICS 218 is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader. **Distribution**: Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles and equipment should be provided to the Resources Unit immediately.
ICS Form 221 Demobilization Check-Out	**Purpose**: The Demobilization Check-Out (ICS 221) ensures that resources checking out of the incident have completed all appropriate incident business and provides the Planning Section information on resources released from the incident. Demobilization is a planned process, and this form assists with that planning. **Preparation**: The ICS 221 is initiated by the Planning Section, or a Demobilization Unit Leader if designated. The Demobilization Unit Leader completes the top portion of the form and checks the appropriate boxes in Block 6 that may need attention after the Resources Unit Leader has given written notification that the resource is no longer needed. The individual resource will have the appropriate overhead personnel sign off on any checked box(es) in Block 6 prior to release from the incident. **Distribution**: After completion, the ICS 221 is returned to the Demobilization Unit Leader or the Planning Section. All completed original forms must be given to the Documentation Unit. Personnel may request to retain a copy of the ICS 221.
ICS Form 225 Incident Personnel Performance Rating	**Purpose**: The Incident Personnel Performance Rating (ICS 225) gives supervisors the opportunity to evaluate subordinates on incident assignments. THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT. **Preparation**: The ICS 225 is normally prepared by the supervisor for each subordinate, using the evaluation standard given in the form. The ICS 225 will be reviewed with the subordinate, who will sign at the bottom. It will be delivered to the Planning Section before the rater leaves the incident. **Distribution**: The ICS 225 is provided to the Planning Section Chief before the rater leaves the incident.

ICS FORM	DESCRIPTION
ICS Form 309 Communications Log	**Purpose**: The Comm Log records the details of message traffic and is used by either an individual or a Net Control Operator (NCO). These logs provide the basic reference from which to extract communications traffic history. **Preparation**: The Comm Log is initiated and maintained by the Net Control Operator (NCO) or the individual operator (e.g., a field communicator). Completed logs are submitted to the supervisor who forwards them to the Documentation Unit. **Distribution**: The Documentation Unit maintains a file of all Comm Logs. All completed original forms MUST be forwarded to the Documentation Unit.

Appendix R Points of Contact (POCs)

Appendix R-1 TICP Agency POCs (All Inclusive)

Table 52: TICP Agency POCs (All Inclusive)

Agency	County	Contact	Phone #	Email
COUNTY				
COUNTY				
COUNTY				
FEDERAL AGENCIES				
NON-GOVERNMENTAL ORGANIZATIONS				

Appendix R-2 Non-governmental Organization (NGO) Contact Information

Table 53: NGO Contact Information

Agency	Name	Position	Phone	Email
COUNTY				
COUNTY				
COUNTY				

Appendix R-3 Committee Member Information

Table 54: Committee Member Information

Agency	Name	Position	Phone	Email

Appendix R-4 CASM Administrative Managers

Table 55: CASM AM POC Information

Name	Phone	Email	Area of Responsibility

Appendix R-5 Auxiliary Communications POCs

Table 56: Auxiliary Communications POCs

County	Call Sign	Name	Affiliation	24/7 Phone E-Mail
State Agencies				
Linn	WA0UIG	Lea Garner	ARES	319-213-3539
Polk	N0VPR	Tom Reis	RACES	515-314-5666
Story	K0GR	Clint Miller	RACES	515-231-6504 isuforester@hotmail.com
Region 1				
Story	WOYR	Paul Cowley	ARES	515-979-4899 pcowley@msn.com
Region 2				
Butler	AE5EI	Joe Hoepfner	ARES	319-215-9709 hoepfnerjoe@gmail.com
Region 3				
Buena Vista	KE0EJS	Jason Knapton	ARES	712-299-5288 jason@ke0eis.com

Region 4				
Adair	WD0FIA	Keith Carpenter	ARES	641-781-0153 wd0fia@hotmail.com
Region 5				
Des Moines	K0BMW	Mike Rosenblatt	ARES	k0bmw@arri.net
Region 6				
Black Hawk	W0ALO	Charles Angel	ARES	319-269-2271

Appendix R-6 Emergency Communications Resource Directory

The Emergency Communications Resource Directory establishes a list of public safety personnel who will respond to fill the Communications Unit (COMU) positions. Identified personnel must train and exercise to a regional response level.

The following table lists contact information of the Regional Emergency Communications Resource Personnel for each COMU position.

Table 57: Regional Emergency Resource Personnel

County	Name	Agency	24/7 Phone Email	COMC	COML	ITSL	COMT	INCM	RADO	AUXCOMM	CACHE THSP	GATEWAY	OTHER THSP
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Appendix S Phonetic Alphabet, Morse Code, Nautical Flags and Sign Language

Letter	Military	Public Safety	Morse Code	Nautical	Sign
A	Alpha	Adam	•—		
B	Bravo	Boy	—•••		
C	Charlie	Charlie	—•—•		
D	Delta	David	—••		
E	Echo	Edward	•		
F	Foxtrot	Frank	••—•		
G	Golf	George	——•		
H	Hotel	Henry	••••		
I	India	Ida	••		
J	Juliet	John	•———		
K	Kilo	King	—•—		
L	Lima	Lincoln	•—••		
M	Mike	Mary	——		
N	November	Nora	—•		
O	Oscar	Ocean	———		
P	Papa	Paul	•——•		
Q	Quebec	Queen	——•—		
R	Romeo	Robert	•—•		
S	Sierra	Sam	•••		
T	Tango	Tom	—		

Letter	Military	Public Safety	Morse Code	Nautical	Sign
U	Uniform	Union	• • —		
V	Victor	Victor	• • • —		
W	Whiskey	William	• — —		
X	X-ray	X-Ray	— • • —		
Y	Yankee	Young	— • — —		
Z	Zulu	Zebra	— — • •		

Appendix T Glossary

Item/Acronym	Definition
ACU-1000	Audio bridge used in fixed and mobile configurations. Requires radio from each connected communications system. Gateway device used to link disparate radio systems.
ADP	Advanced Digital Privacy, a non-standard, proprietary encryption standard patented by Motorola. ADP encryption is not compliant with the P-25 standard.
AES 128	Advanced Encryption Standard, a specification for the encryption and decryption of electronic data using a 128-bit key length.
AES 256	Advanced Encryption Standard, a specification for the encryption and decryption of electronic data using a 256-bit key length. The P-25 standard identifies AES 256 as the preferred standard.
ALGID	Algorithm ID, an indicator in hexadecimal format that identifies the type of encryption used. For P-25 systems, the values are: Unencrypted ($80), DES ($81), AES 128 ($82) and AES 256 ($83). For the purposes of this document, any other type of encryption will have a null value.
AM	Administrative Manager.
Audio Bridge	Connects four-wire audio from disparate radio systems to provide interoperability.
AUXCOMM	Auxiliary Communications personnel, consisting of knowledgeable individuals who support backup communications during emergency operations or planned events.
CASM	Communication Assets Survey and Mapping
CERT	Community Emergency Response Team
CISA	Cybersecurity and Infrastructure Security Agency
CKR	Common Key Reference, also known as the Storage Location Number (SLN) refers to the encryption key slot in the subscriber radio where the encryption key is stored. Each CKR contains the Traffic Encryption Key (TEK), Key ID (KID) and Algorithm ID (ALGID), which are the necessary components for the successful encryption and decryption of information. Common Key Reference Numbers are in decimal format between 0 and 4095.
CLEAR	The channel/talkgroup has no encryption. CLEAR is the default status for all channels/talkgroups.
COMC	Communications Coordinator
COML	Communications Unit Leader
COMT	Communications Technician
Console Patching	Ability to connect channels via dispatch consoles.

Item/Acronym	Definition
Conventional Radio	Radios that operate on fixed radio channels. In the case of multiple channel radios, they only operate on one channel at a time.
DES	Data Encryption Standard, a specification for the encryption and decryption of electronic data using a key length of 56 bits. Superseded by AES 256 encryption.
DHS	Department of Homeland Security
EM	Emergency Management
EMS	Emergency Medical Services
Encryption	The process of encoding a message using an algorithm using an encryption key. Encrypted message traffic can only be decrypted by a recipient with the proper key and decryption equipment.
Encryption Enabled Status	Encryption enabled status for the radio channel provides information on the conditions where a channel would be encrypted. • CLEAR-The channel/talkgroup has no encryption. CLEAR is the default status for all channels/talkgroups. • OPERATOR SELECT SECURE-The channel/talkgroup may be encrypted or unencrypted, depending on the subscriber unit operators' selection. • STRAPPED SECURE-The channel/talkgroup is always encrypted and the subscriber unit operator has no control over the use of encryption on that talkgroup.
Encryption Standard	The specific algorithm and process used to encrypt and decrypt information. For the purposes of this TICP, Encryption Standards will include ADP, AES, and DES.
EOC	Emergency Operations Center
ESF	Emergency Support Function
ETA	Estimated Time of Arrival
FCC	Federal Communications Commission
FD	Fire Department
FEMA	Federal Emergency Management Agency
Fixed	Term referring to a communications asset that is permanently housed in a specific location (i.e., is not mobile).
FRS	Family Radio Service
GMRS	General Mobile Radio Service
IAP	Incident Action Plan
IC	Incident Command
ICC	Incident Communications Center
ICP	Incident Command Post
ICS	Incident Command System

Item/Acronym	Definition
ICTAP	Interoperable Communications Technology Assistance Program
ID	Identification
INCM	Incident Communications Center Manager
Inter-agency	Located or occurring between two or more agencies
Interoperable	Ability of a system to use the parts or equipment of another system
IT	Information Technology
ITSL	Information Technology Service Unit Leader
JFO	Joint Field Office
Key ID	The Key ID (KID) is a 16-bit identifier used to identify a Traffic Encryption Key. P-25 standards reserve the value of $0000 for unencrypted radio traffic.
Key Fill Device	Key Fill Device (KFD). Standardized name for device that installs traffic encryption keys into a mobile device.
Key Variable Loader	Key Variable Loader (KVL), Manufacturer specific reference to a key fill device.
Key Name	Key Name is an alphanumeric name identifying the encryption keyset located in the specified SLN/CKR.
LAN	Local Area Network provided data connectivity through a common communications link or process.
LE	Law Enforcement
LMR	Land Mobile Radio
MCC	Mobile Communications Center
MCU	Mobile Communications Unit
MEOC	Mobile Emergency Operations Center
MHz	Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz.
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
Multi-Key	Multi-key describes the ability of the device to store and utilize more than one key. This is an important feature as many systems use multiple encryption keys for various channels and talkgroups, depending on their usage.
MURS	Multi-use Radio Service
Mutual Aid	Personnel, equipment, or services provided to another jurisdiction.
NIFOG	National Interoperability Field Operations Guide
NIMS	National Incident Management System
NPSPAC	National Public Safety Planning Advisory Committee
NRF	National Response Framework

Item/Acronym	Definition
NSSE	National Special Security Event
NTIA	National Telecommunications and Information Administration
OEM	Office of Emergency Management
Operator Select Secure	Encryption may be turned on or off by the operator as determined by operational requirements. Encryption of information on a talkgroup with Operator Select Encryption requires encryption to be turned on in all radios.
OTAR	Over-the-air-Rekeying (OTAR) describes the ability to transmit or update encryption keys (rekeying) using encrypted communications channels.
PD	Police Department
Phase I Trunking	Phase I trunking uses a separate channel for each voice conversation used in a radio system. In a five-channel trunked system, if 3 unique voice conversations are taking place simultaneously, they would take up 3 separate channels.
Phase II Trunking	Phase II Trunking breaks up voice signals into digital form and supports two simultaneous voice conversations on each channel.
POC	Point of Contact
Portable	Term referring to a mobile communications asset that can be carried by a person and is self-contained.
PSAP	Public Safety Answering Point
RACES	Radio Amateur Civil Emergency Service
RADO	Radio Operator
RAN	Radio Access Network provides the radio base station infrastructure for connectivity between the network and wireless data devices.
RF	Radio Frequency
ROIP	Radio Over Internet Protocol
RSI	Radio Set Identifier
SAR	Search and Rescue
SATCOM	Satellite Communications
SHARES	Shared Resources High Frequency Radio Program
SLN	Storage Location Number (SLN) often referred to as the Common Key Reference (CKR) number, refers to the encryption key slot in the subscriber radio where the encryption key is stored. Each SLN contains the Traffic Encryption Key (TEK), Key ID (KID) and Algorithm ID (ALGID), which are the necessary components for the successful encryption and decryption of information. Storage Location Numbers are in decimal format between 0 and 4095.
SO	Sheriff's Office
SOP	Standard Operating Procedure

Item/Acronym	Definition
STR	Strategic Technology Reserve
Strapped Secure	The channel/talkgroup is programmed to always be encrypted and the subscriber unit operator has no control over the use of encryption on that talkgroup.
Subscriber Unit	A mobile, portable or control station radio that is affiliated to a trunked radio system.
Talkgroup	Term usually used with trunked radio systems. A talkgroup is a virtual channel created within a trunked radio system which allows groups of users to communicate with each other.
TEK	The Traffic Encryption Key (TEK) is the actual key variable used to encrypt and decrypt information. It is stored as a hexadecimal value (ex: $2AC4).
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
Transportable	Term referring to a mobile communications asset that requires a vehicle to transport it and can be set up to operate external to the transport vehicle.
Trunked Radio	In a trunked radio system, the system controller picks one channel out of a pool of channels for a radio to operate on when the Push-to-Talk button is pressed. This provides for more efficient use of a limited number of available channels.
UHF	Ultra-High Frequency – Range of 300 to 3,000 MHz for public safety LMR, usually refers to two bands. 380 to 470 MHz (low) and 470 to 512 MHz (high).
UKEK	Unique Key Encryption Key
USCG	United States Coast Guard
Vehicle-Mounted	Term referring to a mobile communications asset that is mounted/fixed in the transport vehicle and operates from within.
VHF	Very High Frequency – For public safety LMR, usually refers to VHF High Band with a range of 136 to 164 MHz. VHF Low Band has a frequency range below 100 MHz.
WACN ID/SYS ID	The Wide Area Communications Network ID (WACN) and System ID Number (SYS ID) provide a unique identifier for a trunked radio system. Multiple systems may belong to a single, connected network and the WACM ID/SYS ID provides a method to differentiate between these systems. The format of the WACN ID/SYS ID consists of the hexadecimal values for both WACN and System, separated by a hyphen (ex: BEE00-140).

Appendix U Notes