Technical Interoperable Communications Plan (TICP):

Base Plan

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Draft – For Review & Discussion Only

Preface

Communication is the backbone of both daily activity and emergency response. The response system is comprised of a variety of agencies and organizations which must work together under normal conditions and under emergency conditions. Unfortunately, many of the circumstances that create a surge in activity for communications can also compromise the very systems used for communication.

This plan seeks to provide the tools for agencies and organizations to use to operate and maintain communications among responders in the regions, within the state and neighboring states. The overarching goal of this plan being to provide a framework that yields increased resiliency and reliability.

There are wide arrays of threats that can impact or compromise existing communications systems. Fortunately, there are a variety of systems - some operated by government, some operated by the private sector - that can be leveraged to provide communications to necessary personnel to respond to both normal communication needs and to exceptional needs.

This plan seeks to describe the relationships that exist among the participants, provide a listing of critical communication assets, and to provide tools that can be used to improve communications.

Plan Goals

This plan and related materials have been prepared with two goals in mind:

1. Assist in the **establishment and maintenance of routine communications interoperability** to support public safety operations. This goal is largely administrative in nature and includes system engineering, programming, design, and architectures.
2. Assist those responsible for communications with the establishment and maintenance of emergency plans and backup procedures to **maintain emergency communications in the event of a catastrophic situation** that compromises all or part of the communication system.

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Executive Overview

Interoperable communications is one of the hallmarks of effective operations—emergency or otherwise. This document sets forth the technical and administrative components necessary to ensure interoperability within the Districts and also between the Districts.

This plan seeks to document key processes, discipline, personnel, frequencies, talk groups, Internet-based platforms, and other means of communicating. The plan also employs generally accepted methodologies including the National Incident Management System, forms, tools, structures and mechanisms that can be used to maintain the plan, the relationships it documents, and the systems that support it.

This plan is part of a state-wide plan that integrates all of the state's regions with each other, with the state, and with adjoining states.

The goal of this plan is to ensure interoperability of communications/data systems within the regions and within the state. The establishment of an interoperable communications plan provides for a unified and collaborative response to various events ranging from normal operations, weather emergencies, system failures, natural disasters, and malevolent attacks. The unified communications plan coupled with a coalition plan for response will minimize complications and/or confusion while responding to a terrorist attack or natural catastrophe. This interoperable communications plan is National Incident Management System (NIMS) compliant with focus on efforts to ensure all partners are capable of both voice and data communications during catastrophic events. The plan is comprised of input from all stakeholders including the private sector. This is a unified effort integrated with the communication plans of the Indiana Department of Homeland Security and the US Department of Homeland Security to ensure interoperability. This integrated approach maximizes the resources and capabilities of all parties comprising the communications system.

The plan is comprised of a Base Plan, which contains various materials that are common to all the Districts in the state, followed by District-Specific information, procedures, and information. A set of NIMS forms is also included.

How to Use This Plan

The Base Plan sets forth the administrative components and technical aspects of both routine and emergency interoperability. Much of routine interoperability is achieved through system design, architecture, and engineering. These administrative and technical matters are generally the same throughout the ten regions within the state and are therefore contained in the Base Plan.

The District Specific materials are designed to be used with the CASM tool to achieve emergency interoperability and backup in the event of a catastrophic failure of all or part of the communications system. Plan authors recognize that a complete failure of an entire communications system is unlikely, but it is not impossible. The District-Specific materials are designed to facilitate emergency operations during the period between discovery of the catastrophe and recovery from it.

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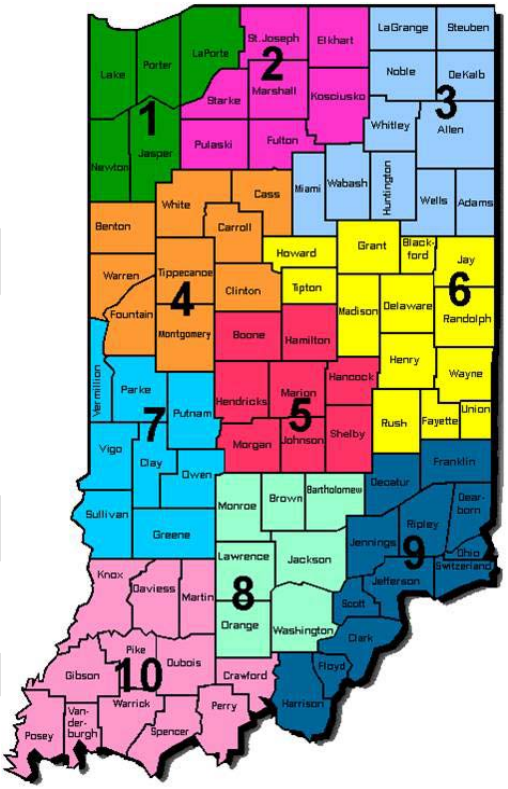
1 Indiana Communications Districts

Figure 1: DHS District Map



1.1 Overview

The state of Indiana has been divided into a series of 10 Districts that are generally aligned along the Metropolitan Statistical Areas. The Districts are aligned geographically and generally are comprised of nine counties.

This plan has been prepared shortly after a consolidation of Public Safety Answering Points (PSAP's) and generally before the migration to Project 25, a major technical shift in radio communication architecture.

This plan does recognize that there must be significant investment to upgrade the equipment and infrastructures to facilitate voice and data interoperability. This will include the caching of portable radios, satellite phones and interface technology. The goal of this initiative is to enhance and enable our first responders to adequately respond and manage a significant incident, attack or catastrophic natural disaster.

The development of a state-wide communications plan provides a unified and cooperative response to natural disasters, attacks, and other problems. This communications plan will support a unified response to any incident within the Districts. It will be the basis for a regional response to the contiguous counties and adjoining jurisdiction. The communications plan draws upon the collective expertise, relationships, and allows for a unified and collaborative plan, ensuring an effective response to natural disasters, attacks, and other significant incidents. This plan will follow NIMS and the National Response Plan to make certain that the Districts are capable of transmitting voice and communication data during times of disasters.

The disciplines included are:

- Law Enforcement
- Fire Service
- Emergency Medical Services
- Hazardous Materials responders (HAZMAT)
- Public Safety Communications
- Emergency Management
- Homeland Security
- Health Care/Hospitals
- Military
- Federal and State Agencies

A complete list of participating agencies and contacts is included in the District Appendices

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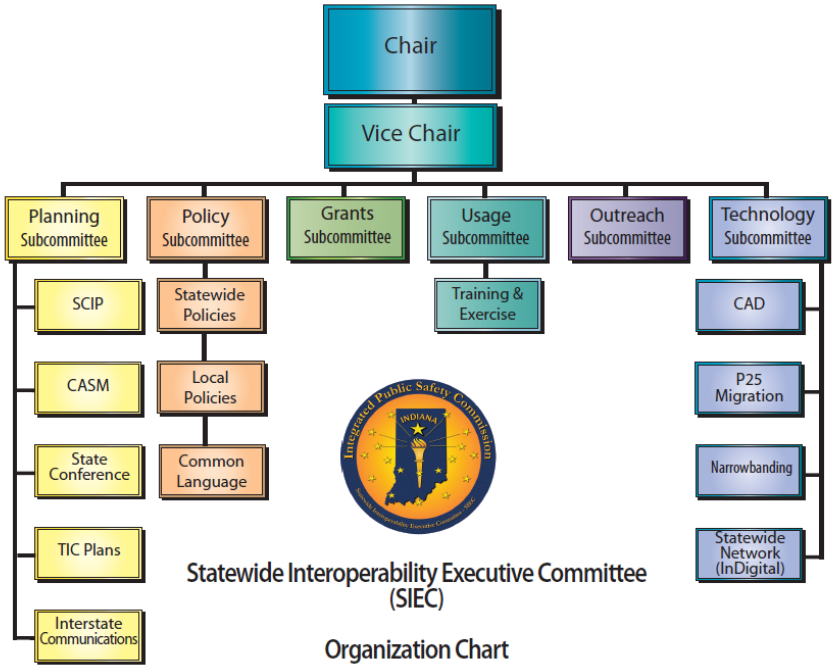
1.2 Governance

Figure 2: SIEC Organization Chart



The TICP addresses interoperable communications equipment and planning for the region. Though each agency, discipline, and jurisdiction participating in this plan is unique regarding their own interoperable communication needs and capabilities, proximity to one another, population, and shared incident/event responsibilities allow them to develop a single, consolidated regional TICP rather than several individual, potentially incompatible, plans.

The TICP therefore consolidates information across agencies, disciplines, and jurisdictions, by documenting regional communications capabilities in order to provide a usable and accurate regional tactical incident response tool.

This plan has been developed under the authority of the Statewide Interoperability Executive Committee and the various District Planning Councils. The Communications Committee advises the District Planning Committee on all matters related to governance and coordination for the development and implementation of this District Interoperable Communication Plan. The District Planning Council ultimately derives its authority from the District Planning Oversight Committee consisting of Mayors, City Councils and County Commissioners of the area jurisdictions.

Members include representatives from the following public safety and public service disciplines:

- Communications
- Critical Infrastructure/Utilities
- Emergency Management
- Emergency Medical Services
- Fire/Rescue
- Information Technology (IT)
- Investigations and Intelligence
- Law Enforcement
- Military
- Nongovernmental Organizations (NGOs)
- Public Health
- Public Works and Utilities
- Human Service Agencies

1.2.1 Governing Body

Figure 3: District Governance Organization Chart

* With the exception of Communications, the Sub-committees listed are examples and may be added to or deleted to best serve the unique needs of the District.

1.2.2 Membership

Each District has a Communications Sub-Committee. The membership is generally comprised of communication officials from the region. Contact information is located within the District-specific materials.

1.2.3 Responsibilities of the Governing Body

The Governing Body will:

- Oversee the implementation of interoperable communications goals of the District
- Establish and manage the Communications Subcommittee and its working groups
- Maintain and update this plan
- Adopt final solutions and direct implementation
- Establish training recommendations in support of this plan
- Manage chains of command for interoperable communications including trained Communications Unit Leaders
- Ensure Memoranda of Understanding and Sharing Agreements for interoperable communications are in place
- Coordination of exercises with respect to the District Plan
- Periodic re-evaluation of this District Plan in light of district-wide requirements as technology evolves and circumstances dictate

1.2.4 Meeting Schedule

Meetings will be held quarterly with published announcements.

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1.2.5 TICP Maintenance and Update

The Governing Body has the responsibility to review this document annually. Requests for modifications or additions to this document should be submitted to the TICP Point of Contact. Updates to this document can be recommended by any of the participating agencies.

1.3 Agency Responsibilities and Rights

Agencies will retain the following rights and responsibilities:

- Agencies are responsible for considering and, if agreeing to, complying with MOUs and Agreements developed within their region in coordination with their respective jurisdictions.
- 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 Standard Operating Procedures (SOPs).
- Where applicable, agencies will be responsible for consistently maintaining, testing, and exercising connectivity to interoperable communications.
- 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.

1.4 District Authority for Coordination and Assignment of Communications Assets

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

Until Incident Command is established, the lead agency designee (i.e., communications supervisor/command personnel), in conjunction/cooperation with their counterparts in other involved agencies, will have the authority to designate the use of interoperable assets. Once the Incident Command has been established, Communication Unit Leaders can be contacted for further coordination and delegation of the interoperable communications assets.

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

1. Disaster, large scale incident, or extreme emergency where imminent danger exists to life or property, and requires mutual aid or interagency communications
2. Other incidents requiring the response of multiple agencies
3. Pre-planned events requiring mutual aid or interagency communications
4. Incidents involving a single agency where supplemental communications are needed for agency use
5. Drills, tests and exercises

In the event of multiple simultaneous incidents within the same priority, the resources should be allocated according to the following:

1. Incidents with the greatest level of exigency (e.g., greater threat to life or property or more immediate need) have priority over less exigent incidents
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options

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

2 Interoperability Equipment

SAFECOM defines communications interoperability as the ability of public safety agencies to talk across disciplines and jurisdictions via radio communication systems, exchanging voice and/or data with one another on demand, in real time, when needed, and as authorized. Specific Interoperability resources for each region are identified in the District-specific materials and within the CASM database.

2.1 Cache Radios (Swap radios)

“Swapping radios” refers to maintaining a cache of standby radios which can be deployed to support incidents within the district. These radios may be from a regional cache, or from a participating agency. These caches allow all responders to use a common, compatible set of radios during an incident. Specific caches are identified within the District-Specific materials and within the CASM database.

2.2 Shared Channels

“Shared channels” refer to common frequencies, channels, or talk groups (such as those of a participating agency) which have been established and are programmed into radios to provide interoperable communications among agencies. Specific shared interoperable communications channels idetified within the District-Specific materials and within the CASM database.

2.3 Gateway

“Gateway” systems interconnect channels or talk groups of different systems (whether on different bands or modes), allowing first responders to use their existing radios and channels to be interconnected with the channels of other users outside of their agency. Gateways are identified within the District-Specific materials and within the CASM database.

2.4 Shared Systems

“Shared systems” refers to the use of a single radio system infrastructure to provide service to several Public Safety agencies within an area. The State-wide IPSC system is available to all of the Districts. Each region also has their own radio systems and all have access to the Amateur (HAM) radio network. Specific systems are identified in the District-specific materials and in the CASM database.

2.5 Communication Vans

These Units support communications for all Public Safety and Public Works agencies and are capable of movement from place to place as necessary. The specific capabilities of these vehicles and trailers are detailed in the District-specific materials and in the CASM database. Below you can find descriptions of what the different types of vans are categorized as.

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Figure 4: Communication Vans (Mobile EOC)

ESF #2 MOBILE COMMUNICATIONS CENTER (ALSO REFERRED TO AS "MOBILE EOC")					
Minimum Capabilities		**Type I**	**Type II**	**Type III**	**Type IV**
Component	**Metric**				
Vehicle	Chassis	48'-53' custom trailer, bus chassis, conventional cab/van chassis, or diesel motor home chassis with or without slide out room	35'-40' motor home chassis with or without slide out room	25'-35' gas or diesel motor home chassis, or custom trailer (trailer does not require additional tow)	Converted SUV or travel trailer, or 25'-40' custom built trailer (trailer does require additional tow vehicle)
Equipment	Interior	6-10 workstations with private meeting area for command personnel	4-6 workstations with private meeting area for command personnel	2-4 workstations	1-2 workstations
Equipment	Radio Frequency Transceivers	RF communications with adjoining agencies, State agencies through mutual aid transceiver & any other frequencies	RF communications with adjoining agencies, State agencies through mutual aid transceiver & any other frequencies	RF communications with adjoining agencies, State agencies through mutual aid transceiver	RF communications within jurisdiction and with adjoining agencies
Equipment	Internet Access Speed; High Speed; Fax Speed	High bandwidth capabilities via satellite such as INMARSAT or V-SAT	High bandwidth capabilities via satellite such as INMARSAT or V-SAT; Faxing through cell or satellite system	Cellular System; Faxing through cell or satellite system	Via cellular system (portable)
Equipment	See Note 1	PBX office-style telephone system & Cellular PBX system	PBX office-style telephone system & Cellular PBX system	PBX office-style telephone system	
Equipment	On-scene Video Monitoring	Through camera / video system	Through camera / video system		
Equipment	Computer Assisted Dispatch (CAD)	Yes	Yes	Yes	
Equipment	Computer / Server Capabilities	Same as Type III	Same as Type III	Hardwired & wireless LAN Ethernet connection & 120 vac protected receptacle. All computer based software packages pre-installed	Basic computer systems only (power source must be provided outside vehicle)
Personnel	Function	Same as Type II except: Driver / Operator with CDL certification	Same as Type III plus IT support & communications support	Same as Type IV	Driver / Operator
Personnel	Deployment Capabilities	See Note 2	See Note 2	See Note 2	
Notes Section					
Note 1:	*Voice communications through landlines, cell line, & satellite*				
Note 2:	*All types should be capable of:* *1. Operating in environment with little to no basic services, including no electrical service, no phone lines, & no cell towers* *2. Providing own power generation & fuel supply to operate a minimum of 3-4 days without refueling* *3. Sustaining long term deployment as well as short term response* *4. Facilitating communications between multiple agencies (Federal, State, County, & Municipal agencies* *5. Operating as forwards EOC* *6. Minimal set up time* *7. Serving basic personnel needs such as a bathroom, mini-refrigerator, microwave, & coffeemaker where space is available*				

3 Policies and Procedures for Interoperable Equipment

- National Incident Management System - Use of an Incident Command System compliant with the National Incident Management System is recommended for use of any district wide interoperability resource.

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- Plain language - All interoperable communications through command or general staff should be conducted in plain language. Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Requests for assistance or backup should clarify the reason for the request.
- Unit Identification - Agency name shall precede unit identifier, i.e., IPD Adam 135, Carmel Engine 45.
- The Incident Commander will ensure that each activated interoperability channel is monitored.

3.1 Plain Language

The use of common terminology is about the ability of area commanders, State and local EOC personnel, federal operational coordinators, and emergency responders to communicate clearly with each other and effectively coordinate response activities, no matter what the size, scope or complexity of the incident. The ability of responders from different jurisdictions and different disciplines to work together depends greatly on their ability to communicate with each other.

While the NIMS Integration Center does not require plain language for internal operations, it strongly encourages it, as it is important to practice everyday terminology and procedures that will need to be used in emergency incidents and disasters. NIMS implementation is a long-term effort and it is probably not possible to persuade everyone to change ingrained habits overnight. But we do hope that over time, everyone will understand the important of using common terminology, that is, plain language, every day.

It is required that plain language be used for multi-agency, multi-jurisdiction and multi-discipline events, such as major disasters and exercises.

3.2 Cache Radios

These cached radios are available for outside agencies to use during times of emergency (i.e., private agencies, Red Cross, etc.).

3.2.1 Cache Provider Responsibilities

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

- Be fully charged and maintained, ready for deployment at all times
- Include extra charged batteries/replacement batteries and chargers for extended deployments
- Personnel available to transport the radios to the incident scene
- Available support personnel for on-scene support during the deployment (with permission from Incident Commander, long term cache deployment may not require support personnel)
- Radios should be labeled with owning agency information and operating instructions
- Each radio cache shall have a designated radio cache manager
- Check-out and tracking procedures are used during the incident to ensure the radios are properly returned to the cache following the incident

3.2.2 Cache/Swap Radios Rules of Use

The requesting agency shall be responsible for the return of any cache radios/equipment in the condition they were received, per the Mutual Aid Agreement between agencies

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3.2.3 Interoperable Communications Request

- The Incident Commander will determine when a situation exists which requires use of a district wide interoperability resource and will notify the appropriate dispatch center
- The following information is provided by the requesting agency to the dispatch center at the time of an activation request:
    - User's agency
    - On-scene agencies requiring interoperability
    - Reason for request/type of event, (i.e., tornado, etc.)
    - Equipment required
    - Location required/access information
    - Incident point of contact
    - User/requestor and/or servicing dispatch contact phone number
- The dispatch center will make appropriate notifications
- The Radio Cache Manager will provide the contact information for the radio cache to the Incident Commander or their designee

3.2.4 Swap/Cache Radio Activation

- The Radio Cache Manager will provide an estimated response or activation time, which will be relayed to the dispatch center of the agency having jurisdiction over the event and the Incident Commander
- A knowledgeable support person will be sent to the incident scene to assist in the deployment of the radios
- The support person will be responsible for keeping a record of each user to whom a radio and associated accessories has been distributed, the agency of the user, and the identification number of the radio(s) provided to that individual
- Each user and/or agency which has received a radio from the radio cache will be responsible for the return of that radio and associated accessories to the cache at the end of the incident

3.2.5 Swap/Cache Radio Deactivation

- The Incident Commander will determine when the radio cache is no longer required
- The Incident Commander, COML, or appropriate Section Chief will be responsible for coordinating the return of cache radios to the appropriate on-scene support personnel or designee
- At the end of the incident, the support personnel will be responsible for inventorying all radios and accessories returned to the cache. Before leaving the incident scene, the support personnel will determine if any radios have not been returned, or returned damaged, to the radio cache and note the user and/or agency to which the radio was distributed. This information will be provided to the Incident Commander or appropriate Section Chief. If the missing radios cannot be recovered at the incident scene, the support personnel will provide this information to the Radio Cache Manager for resolution.

3.2.6 Problem ID and Resolution

<u>During an incident:</u>

- Initial problems should be reported to the Communications Unit Leader or appropriate Section Chief
- During deployment, problems with individual radios will be reported to the COML or support personnel dispatched to the scene, if practical

<u>Following an incident or during post incident debriefing:</u>

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- Agencies using cache radios shall report any problems with the cache to the appropriate Radio Cache Manager for that agency
- The Radio Cache Manager will be responsible for ensuring effective resolution to problems which exist with the radio cache
- The agency supplying the cache will bring to the attention of the using agency information on missing or damaged radio equipment

3.3 Shared Channels: Mutual Aid Channels and Talk Groups

The procedures in Section 34.2.3 apply to the Mutual Aid channels specifically listed within the District-specific materials and in the CASM database.

3.3.1 Overview Mutual Aid Channels and Talk Groups

Generally, each District has shared channels and talk groups to provide radio interoperability in day to day operations. For large scale incidents there are tactical operation talk groups available on each system that can be utilized using either shared talkgroups programmed into field radios or Gateways. Each radio is also equipped with the NPSPAC frequencies. Radios have been programmed with the local talkgroups and IPSC systems. These talkgroups should be utilized as the primary talkgroups.

- Large scale incidents may require usage of the NPSPAC channels as well as the patching of talkgroups between systems.
- Large scale incidents may require the sharing of channels and talkgroups from District or county systems that are programmed into the regional radios.
- Large scale incidents in the counties served by the IPSC system may require the sharing of local talkgroups programmed into the radios. In addition there are regional and statewide talkgroups available. When possible these talkgroups should be utilized for long range or command. NPSPAC channels should be utilized when possible to prevent overloading of the local towers. There are rules concerning the patching of IPSC talk groups.

There is an Amateur Radio Emergency Communications Network available during critical periods such as during large public events and other crisis situations. This network will provide a parallel and supportive system to emergency management agencies; amateur radio communications among hospitals, police/fire stations, critical government agencies; and the Emergency Operations Center.

Note: Console patches and Gateways can be an effective way to provide interoperability providing the repeater systems in the Districts are functioning. IPSC highly discourages the use of console patching on their system.

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Figure 5: Shared Channels Statewide

Tx (MHz)	Rx (MHz)	CTCSS	Channel Name
866.0125	821.0125	156.7	National Mutual Aid Calling Channel 8-CALL
866.5125	821.5125	156.7	National Mutual Aid 8TAC-1
867.0125	822.0125	156.7	National Mutual Aid 8TAC-2
867.5125	822.5125	156.7	National Mutual Aid 8TAC-3
868.0125	823.0125	156.7	National Mutual Aid 8TAC-4
Tx (MHz)	**Rx (MHz)**	**CTCSS**	**Channel Name**
155.7525	155.7525	156.7	National Mutual Aid Calling Channel V-CALL
151.1375	151.1375	156.7	National Mutual Aid VTAC-11
154.4525	154.4525	156.7	National Mutual Aid VTAC-12
158.7375	158.7375	156.7	National Mutual Aid VTAC-13
159.4725	159.4725	156.7	National Mutual Aid VTAC-14

ID	Channel Name	ID	Channel Name
SW-1	Statewide Mutual Aid 1	H-MA1	Terre Haute Mutual Aid 1
SW-2	Statewide Mutual Aid 2	H-MA2	Terre Haute Mutual Aid 2
SW-3	Statewide Mutual Aid 3	H-MA3	Terre Haute Mutual Aid 3
SW-4	Statewide Mutual Aid 4	I-MA1	Putnamville Mutual Aid 1
SW-5	Statewide Mutual Aid 5	I-MA2	Putnamville Mutual Aid 2
SW-6	Statewide Mutual Aid 6	I-MA3	Putnamville Mutual Aid 3
SW-7	Statewide Mutual Aid 7	J-MA1	Indianapolis Mutual Aid 1
SW-8	Statewide Mutual Aid 8	J-MA2	Indianapolis Mutual Aid 2
SW-9	Statewide Mutual Aid 9	J-MA3	Indianapolis Mutual Aid 3
SW-10	Statewide Mutual Aid 10	K-MA1	Connersville Mutual Aid 1
A-MA1	Lowell Mutual Aid 1	K-MA2	Connersville Mutual Aid 2
A-MA2	Lowell Mutual Aid 2	K-MA3	Connersville Mutual Aid 3
A-MA3	Lowell Mutual Aid 3	L-MA1	Bloomington Mutual Aid 1
B-MA1	Bremen Mutual Aid 1	L-MA2	Bloomington Mutual Aid 2
B-MA2	Bremen Mutual Aid 2	L-MA3	Bloomington Mutual Aid 3
B-MA3	Bremen Mutual Aid 3	M-MA1	Seymour Mutual Aid 1
C-MA1	Fort Wayne Mutual Aid 1	M-MA2	Seymour Mutual Aid 2
C-MA2	Fort Wayne Mutual Aid 2	M-MA3	Seymour Mutual Aid 3
C-MA3	Fort Wayne Mutual Aid 3	N-MA1	Versailles Mutual Aid 1
D-MA1	Lafayette Mutual Aid 1	N-MA2	Versailles Mutual Aid 2
D-MA2	Lafayette Mutual Aid 2	N-MA3	Versailles Mutual Aid 3
D-MA3	Lafayette Mutual Aid 3	O-MA1	Evansville Mutual Aid 1
E-MA1	Peru Mutual Aid 1	O-MA2	Evansville Mutual Aid 2
E-MA2	Peru Mutual Aid 2	O-MA3	Evansville Mutual Aid 3
E-MA3	Peru Mutual Aid 3	P-MA1	Jasper Mutual Aid 1
F-MA1	Redkey Mutual Aid 1	P-MA2	Jasper Mutual Aid 2
F-MA2	Redkey Mutual Aid 2	P-MA3	Jasper Mutual Aid 3
F-MA3	Redkey Mutual Aid 3	Q-MA1	Sellersburg Mutual Aid 1
G-MA1	Pendleton Mutual Aid 1	Q-MA2	Sellersburg Mutual Aid 2
G-MA2	Pendleton Mutual Aid 2	Q-MA3	Sellersburg Mutual Aid 3
G-MA3	Pendleton Mutual Aid 3		

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3.3.2 Mutual Aid Channels/Talk Groups Rules of Use

The Standard Operating Procedures (SOP) as developed by Emergency Management and the Amateur Radio Emergency Coordinator will reference this.

The Regional M/A Channels will be reserved for inter-communication in situations requiring the coordination of multiple public safety entities. MA-1 is for hot broadcasts and to contact the State Police. MA-2 or MA-3 are used for on scene communications. The State Police are responsible for the coordination of the use of these talk groups in each district.

3.3.3 Mutual Aid Channels/Talk Groups Procedures

Notify appropriate State Police Region. Reliance upon any M/A talkgroups on the IPSC system does not take into account the following:

1. Overloading (busying-out) the available resources on the IPSC system.
2. Any incident has the potential of taking out T-1 lines which the IPSC system is reliant upon. One or more sites may be in SITE TRUNKING during the event.

The Statewide and Regional Talkgroups should be utilized for command and/or longer range communications. When possible utilize the NPSPAC conventional resources.

3.3.4 Problem ID and Resolution

The COML will be responsible for documenting any problems with the usage of Mutual Aid Channels. The COML shall prepare a written report to the Deputy Director of Hendricks County Communications Center (HCCC). HCCC will be responsible for meeting with the State to resolve the issue.

3.4 Shared Channels: All Other Shared Channels/Talk Groups

The procedures in this section apply to all other shared channels not addressed previously. See the District-specific materials and the CASM database for a list of shared frequencies/talk groups, name/designation and agencies supported.

3.4.1 Shared Channels Rules of Use

NPSPAC usage will only be used by permission of the Incident Commander, after informing the appropriate Dispatch Center. NPSPAC channels will not be monitored unless specifically requested by the Incident Commander.

3.4.2 Shared Channels/Talk Groups Procedures

As the local talkgroups are programmed into each radio, it is encouraged to utilize those talkgroups when possible. At the present time the NPSPAC channels will only be used for on scene communications when the Incident Commander determines there is not sufficient radio coverage for the local talkgroups to be utilized. The Incident Commander will ensure the NPSPAC channels will be monitored on the scene. If the Incident Commander or the Communications Unit Leader determines resources on the scene only can communicate using the NPSPAC channels, the dispatcher is to be notified when NPSPAC channels are being utilized.

Note: NPSPAC channels are not recorded or monitored by the dispatch centers.

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3.4.3 Problem ID and Resolution

The Incident Commander or his designee will be responsible for reporting the issues or problems identified with the use of the shared channels to the Communications Unit Leader designated for the incident.

The COML shall be responsible for documenting the issue/problem of the shared channels. COML will be responsible for bringing the issues to the Communications Committee for resolution.

3.5 Fixed Site/Mobile Gateways

This document provides guidance on how to request and use fixed gateways in the District.

3.5.1 Participating Agencies

District-specific materials and the CASM database lists the agencies supported by each fixed site gateway device and detailed information on all fixed site gateways available for use within the district.

3.5.2 Fixed Site/Mobile Gateway Rules of Use

Never assume encryption carries across the gateway. See section 4.5.1 for policies governing the use of IPSC Talk groups patched to other systems.

3.5.3 Fixed Site/Mobile Gateway Communications Request

The Communications Unit Leader/Incident Commander must be aware of the multiple gateway activations in support of an incident can result in mutual interference. Interference issues are best resolved by the technical support team assigned to the gateways.

During critical incidents, any requests for use of a gateway should be submitted to the Communications Unit Leader or designee.

A radio user requiring direct communications with a user from a different agency shall follow their own agency's procedures for requesting connectivity. Typically, a user should request connectivity by contacting their agency's dispatcher.

The following information is provided by the requesting agency at the time of an activation request:

- User's agency
- Talk Groups or Radio Channels which need to be patched
- User/requestor and/or servicing dispatch contact phone number
- At the termination of the event they should notify their agency's dispatch center

3.5.4 Fixed Site/Mobile Gateway Activation

Once authorization has been granted, each communication center should follow their internal procedures for activating the connectivity. Procedures for establishing communications connectivity include:

- Selection of a channel or talkgroup on your home system if necessary
- Contact IPSC at 317-234-1540 if the talk groups being patched are IPSC talk groups
- Verify system-wide availability of required resources – coordination among control point dispatchers
- Provide radio call sign/designator information to connected agencies as needed
- Assign the requested unit/agency to that channel or talkgroup

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- Utilize your agency's internal procedures for establishing connectivity between the agencies
- The control point dispatcher will connect the agency to the appropriate talkgroup
- Announce to users when interoperability is activated

3.5.5 Fixed Site/Mobile Gateway Deactivation

When the interoperable communications connection is no longer required, agencies should follow these deactivation procedures:

- The requesting agency/user or incident commander where the emergency event occurred shall contact their dispatcher so the patch can be deactivated
- The dispatcher shall make an announcement on the interoperable channel/talkgroup indicating the connection will be deactivated prior to the connection being disabled
- All personnel shall return to their appropriate home system channel assignment
- Notify IPSC at 317-234-1540 when the Long Term Patch is broken

3.5.6 Problem ID and Resolution

During an incident:

- Problems with gateways, upon activation, should be reported to the dispatcher who will follow standard agency procedures to resolve the problem

Following an incident or during post incident debriefing:

- Agencies using gateways will report any problems encountered to the appropriate POC for the Gateway. The POC will be responsible for ensuring effective resolution to problems which exist with the gateway, and are listed in the District-specific materials and in the CASM database.

3.5.7 Fixed Site/Mobile Gateway Limitations

The interoperability provided through a gateway has the ability to link participating agencies but has the following limitations:

- The number of simultaneous patches which can be supported by each gateway is limited by switch capacity and the number of lines connecting control centers and consoles
- Home system coverage may limit communications: Users must be within the footprint of the coverage area

3.5.8 Fixed Site/Mobile Gateway Test Procedures

To ensure equipment components of the interoperability solution are operating properly, each agency should participate in regular testing as established by agreement of the agencies. Twenty-five percent of all gateway connections will be tested quarterly by the agency owning the gateway.

3.6 Console Patching

Some counties support interoperability of radios through console patching *. This involves "patching" talk groups from the local system into any of the radio systems at the dispatcher's consoles. Many dispatch centers use this form of communications daily to integrate the disparate systems in the area.

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3.6.1 IPSC Console Patching

Due to the configuration of the IPSC radio system the following rules must be followed when patching IPSC to other radio systems. This policy involves patching to or within the IPSC statewide 800 Mhz trunked radio system.

- Short-Term Patch refers to a patch that is intended to be used for 30 minutes or less. You do not need to notify IPSC in this case.
- Long Term Patch refers to a patch that is in place longer than 30 minutes. You must notify IPSC at 317-234-1540, and provide the following information:
    - Location of Patch
    - Name, Address, Telephone number and Email (if any) of the specific person responsible for the patch
    - Talkgroup(s) patched
    - Anticipated length of patch
    - Purpose of patch
- IPSC reserves the right to break any/all patches at any time
- IPSC must be notified at 317-234-1540 when the approved long-term patch is broken.

3.7 Shared Systems

3.7.1 Shared System Procedures

Agencies should follow procedures and policies already established for their shared systems.

3.7.2 Problem ID and Resolution

Agencies should identify and resolve problems in accordance with policies already established for their shared systems.

3.8 Communications Vans

Agencies involved in major incidents are encouraged to utilize the FEMA classified Communication Vans of the District. These units provide superior communications resources to the Incident Commander.

The Communications Vans are available 24 x 7 by contacting the appropriate Dispatch Center and providing the following information.

- User's agency
- Reason for request/type of event, i.e. tornado, etc.
- Location required/access information
- Incident point of contact
- The user/requestors telephone number with the telephone number of their dispatch center

The Agency dispatching the Communications Van shall be responsible for notifications of person as per their department SOP.

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3.9 Amateur Radio

Emergency communications in support of the Emergency Management function shall be the primary function of the District-specific RACES or EMA Radio Groups.

The mission of these groups shall be as follows:

- To establish and maintain an emergency communications radio network during critical periods such as large public events and other crisis periods
- To provide a parallel and supportive emergency communications radio system to the District 5 Emergency Management Agencies amateur radio operations at the EOC and Incident Command Posts. To provide another means of communications to the State EOC in emergencies
- To provide technical assistance, advice, and consultation as part of the planning apparatus of the Emergency Management Agency (EMA) with respect to emergency communications matters
- To provide a liaison to other emergency and human service groups such as the Red Cross, Salvation Army, and other county organizations of this type

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4 Evaluation and Response Checklist

This figure contains checklists and emergency action steps that should be used to evaluate a systemic failure or interruption. The table should be used left to right, to evaluate the problem and respond to it. It is specifically designed to address the unique facts and circumstances of the problem at hand and to assist in the crafting of an appropriate response.

Figure 6: Evaluation and Response Checklist

EVALUATION AND RESPONSE	
EVALUATION MATRIX	**INTEROPERABILTY RESPONSE**
☐ What is damaged? ◻ PSAP/Call Center ◻ 911/Telephone ◻ Electricity ◻ CAD ◻ Alerting/Paging/Mobile Data ◻ Data/Records System ◻ Transmission Equipment ◻ Tower(s) ☐ What caused the damage? ☐ Is the facility safe to occupy & use? ☐ How long will it take to restore? ☐ What resources are needed?	◻ Onsite Redundancy/Backup ◻ County Redundancy/Backup ◻ Radio to Radio ◻ Mobile Communication Van(s) ◻ Alternate Facility within District ◻ Alternate District ◻ SAFE-T (IPSC) ◻ Amateur Radio (RACES) ◻ Public Cellular ◻ Voice ◻ Text Message ◻ Internet Access ◻ Wireline Telephony ◻ Voice ◻ Outbound Messaging (Reverse 911) ◻ Internet (Web) Tools ◻ WebEOC ◻ Electronic Mail ◻ Social Media (Facebook, etc.) ◻ Hardcopy Messenger ◻ Fire Station(s) ◻ Convenience Store(s)
GENERAL RESPONSE	**NOTIFICATIONS**
◻ Identify nature and extent of problem ◻ Determine whether protective action is needed (including personal protective measures and evacuation) ◻ Warn others as needed ◻ Call for more help than you need ◻ Assess situation ◻ Evaluate action options ◻ Secure assets ◻ Initiate best course of action	◻ Field Personnel (system users) ◻ Call Center Manager(s) ◻ District PSAP's ◻ County Officials/EMA ◻ IDHS ◻ Coordinate State/Federal Resource requests ◻ Coordinate Damage Assessment ◻ Disaster Declarations ◻ Resource requests ◻ Regional Support ◻ Public Carriers ◻ Utilities ◻ Media ◻ Provide Warning ◻ What has happened ◻ When it happened ◻ Where it happened ◻ Who/what is involved ◻ What is being done in response ◻ What people should do ◻ What services are available ◻ Why it happened (if known) ◻ How it happened (if know) ◻ What investigative steps are being taken ◻ What is being done to repair/restore normalcy

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5 CASM

5.1 Overview (ICTAP/CASM-DCGUIDE-003-R0)

The Communication Assets Survey and Mapping (CASM) tool provides the ability for representatives of public safety agencies within an urban area or State to collect, store, and visualize data about agencies, communication assets, and how agencies use those assets.

The purpose of CASM is to:

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

The CASM tool is composed of two components: the Communication Assets Survey (CAS) and the Communication Assets Mapping (CAM) tool. The CAS component provides a means to enter, edit, and delete information about agencies, communication assets (such as radio systems, dispatch centers, mutual aid channels/systems, gateways and radio caches), and agency usage of those assets. The CAM component provides a means to display this information in a map-based interface and provides analysis tools for displaying agency-to-agency interoperability, including interoperability gaps, in various ways.

The CASM tool is web-based and requires the user to have an active internet connection in order to access both the CAS and CAM components. CAS is a website that may be accessed via any internet browser, such as Internet Explorer, Netscape Navigator, or Mozilla Firefox. CAM is a client application that must be downloaded, installed, and executed on the user's computer. A user must have internet access in order to operate CAM.

Each user must have a user name and password in order to login.

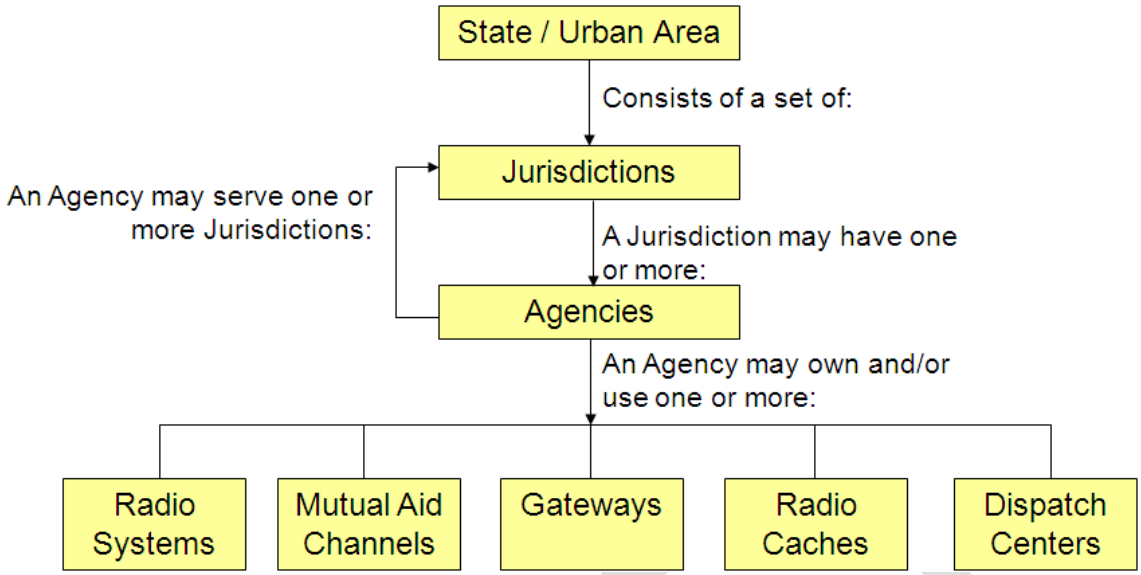
The State of Indiana Public Safety Commission of the State of Indiana will be responsible for inputting data provided by each county in the district. It is the responsibility of the District ~~5~~ county representative to provide the data to IPSC.

The effectiveness of the CASM tool is directly related to the quality of the information it contains.

Required Fields

The tables in this section indicate whether a data field is required or optional. This means that if the user begins entering data in this area, they must provide data for the required fields. If the user does not have data to enter for a particular area, then the required fields are not applicable. To illustrate, if the user is going to enter data about an agency, they must provide the name of the agency, the discipline (police, fire, etc.) and that agency's primary jurisdiction in order to complete the form to enter new agency data. On the other hand, if the user does not have gateway data to enter because the agencies they represent.

High-level Perspective on Data Organization



The state/urban area and jurisdictions (counties, cities) that compose the state/urban area are created when the CASM tool is initiated for use by a state/urban area.

A user typically represents one or more first responder / public safety agencies and enters data about the communication assets that their agency(s) own and use. The CASM tool encourages that data entry is not duplicated. For example, if one user enters all the data for a particular radio system, all the other users that represent agencies that use that radio system do not need to enter that data also. All they need to do is indicate or verify that their agency uses the previously defined radio system and indicate the channels or talk groups that they use on that system.

Agency Definition

In CASM, an agency is defined as a first responder agency or organization such as a police department, sheriff, fire department or emergency medical service. An agency/organization may also be a health care agency, highway patrol, public health, public safety communications, public works, government or other type. It is best to think of an agency as a group of people providing a service in the interest of public safety that other public safety agencies need to interoperate with. An agency may own, maintain, or use communication assets.

Entering data for an agency involves entering data in the following areas, (if applicable):

1. Agency Definition, high-level attributes
2. Radio System(s) that the agency owns/manages/uses
3. Channels and talk groups that the agency uses
4. Mutual Aid channels that the agency uses
5. Gateways that the agency owns/manages
6. Radio Caches that the agency owns/manages
7. Dispatch Centers that the agency owns/manages
8. Point(s) of Contact may be entered for an agency
9. Radio equipment that the agency uses

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Agency Data	Notes
Agency Name	Required
Discipline	Required; options provided are: EMS, Fire, Government, Health Care, Highway Patrol, Police, Public Health, Public Safety Communications, Public Works, Sheriff, Other
Primary Jurisdiction	Required; a jurisdiction is a specific city, county or state
Agency Address	Optional
Other Entities Served	Optional; other jurisdictions that the agency serves
Comments	Optional
Capabilities	Optional; options provided are: HAZMAT, EOD, USAR

Radio System Definition

In CASM, a radio system is a land mobile radio (LMR) system; an organized set of channels or talk groups that are used by an agency for communications. The channels are likely transmitted on one or more structures.

Entering data about a radio system involves entering data in the following areas:

1. Radio System Definition, high-level attributes
2. Agencies that use the system
3. Channels, if system is conventional or trunked
    a. Agencies that use each channel, if the system is conventional (non-trunked)
4. Talk Groups, if the system is trunked
    b. Agencies that use each talk group, if the system is trunked
5. Structures that support the system
6. Repeater/Base Station (RBS) information, for each structure, identifying the channels that are transmitted
7. Point(s) of Contact may be entered for a radio system and for a structure

Radio System Data	Notes
Radio System Name	Required
Owner/Responsible Agency	Required; options are provided from agencies entered previously
Agency use of system	Required; options are: Primary System (default), Secondary System
Number of Mobile Radios	Optional
Number of Portable Radios	Optional
Notes on Agency Use	Optional
Primary Make (Manufacturer)	Optional; options are provided
System Type	Optional; options provided are: Conventional (default), Trunked or Both
Model Name	Optional

Trunking Type	Optional, if trunked; options are provided
Frequency Band	Required; options are provided
Project 25 Compliant	Required; options are provided
Number of Channels	Optional
Encryption Protocol	Optional; options are provided
Year Installed	Optional; options are provided
Repeated / Simplex	Optional; options provided are: Repeated (default), Simplex, Both
Analog / Digital	Optional; options provided are: Analog (default), Digital, Both
Wideband / Narrowband	Optional; options provided are: Wideband (default), Narrowband, Both
Voted	Optional; yes (default) or no
Simulcast	Optional; yes (default) or no
Service Area Comments	Optional
Notes on System	Optional
Channel Data	**Notes**
Type of Tones	Required; options provided are: None, CTCSS, CDCSS, NAC, and Mixed Mode. The selected default is based on information about the radio system.
Frequencies to be entered	Required; options provided are: Tx Only, Rx Only, Both (default)
Transmit Frequency	Required for a Transmit Only or repeated channel from the Repeater perspective
Transmit Tone	Optional; options are provided based on selection above
Receive Frequency	Required for a Receive Only or repeated channel from the Repeater perspective

Gateway Definition

In CASM, a gateway is an audio bridge device used by multiple agencies to provide interoperability between dissimilar radio systems.

Entering data about a gateway involves entering data in the following areas:
1. Gateway Definition, high-level attributes
2. Selecting channels and talk groups that are configured on the gateway from the channels and talk groups on radio systems and mutual aid channels/systems that have been entered previously.
3. Point(s) of Contact may be entered for a gateway

Gateway Data	Notes
Gateway Name	Required

Gateway Owner / Responsible Agency	Required; options are provided from agencies entered previously
Gateway Usage	Required; options provided are: Day-to-Day or Incident/Event
Gateway Make / Model	Optional; options are provided
Gateway Type	Optional; options provided are: Fixed or Mobile (default)
Number of Simultaneous Nets	Optional
Number of Active Ports	Optional
Address where gateway is stored	Optional
Mobile Service Area	Optional
Notes	Optional

Radio Cache Definition

In CASM, a radio cache is a defined set of radios that is configured, stored, and available to support a response to an incident.
Entering data about a radio cache involves entering data in the following areas:

1. Radio Cache Definition, high-level attributes
2. Radio equipment that comprises the cache
3. Agencies that may deploy the cache
4. Selecting channels and talk groups that are configured on the cache from the channels and talk groups on radio systems and mutual aid channels/systems that have been entered previously. Channels that are configured on the cache, but do not appear in the select list may be entered at this point.
5. Point(s) of Contact may be entered for a radio cache

The Add New Cache Channel page, launched from the Radio Cache Channel page, enables you to enter channels (i.e., Tx/Rx pairs) programmed on the cache that are not part of a radio system. You may use this page to enter talk-around channels

Radio Cache Data	Notes
Radio Cache Name	Required
Cache Owner / Responsible Agency	Required; options are provided from agencies entered previously
Cache Radio Frequency Band	Optional; options are provided
Address where cache is stored	Optional
Cache Service Area	Optional
Notes	Optional

Dispatch Center Definition

In CASM, a dispatch center is a place that provides dispatch service for one or more agencies. It may or may not also perform as a Public Safety Answering Point (PSAP), and may or may not provide console patches.

Entering data about a dispatch center involves entering data in the following areas:

1. Dispatch Center Definition, high-level attributes (Table 11)
2. Agencies that are served by the dispatch center
3. Other dispatch centers that are connected to the dispatch center.
4. Point(s) of Contact may be entered for a dispatch center (Table 12)

Dispatch Center Data	Notes
Dispatch Center Name	Required
Dispatch Center Owner / Responsible Agency	Required; options are provided from agencies entered previously
Address	Optional
PSAP	Optional; yes or no

Point of Contact (POC) Definition

In CASM, a point of contact is a person who serves as a primary or secondary point of contact for an agency, radio system, dispatch center, gateway or radio cache. The information for a person need only be entered one time and may be linked to multiple communication assets. For example, if John Smith is the POC for City Police Department and he is also the POC for the City Police Department's gateway, named "City Gateway", John Smith's contact information only needs to be entered once and then linked to both City Police Department and to City Gateway. The user may view Point of Contacts from the perspective of the communication asset or from the prospective of the contact. Using the example above, the user could see that John Smith is the POC for City Police Department by clicking the POC link from the City Police Department record, or could see that John Smith is the POC for City Police Department and City Gateway by clicking the John Smith's link from the POC page.

Entering data about a point of contact involves entering data in the following areas:

1. Point of Contact Definition (Table 12)
2. The communication asset(s) that the person is the POC for.

Point of Contact Data	Notes
Contact Last Name	Required (if Company Name is not provided)
Contact First Name	Optional
Contact Middle Initial	Optional
Contact Suffix	Optional; e.g. Jr. III
Contact Personal Title	Optional; e.g. Capt., Lt., PhD
Company / Organization	Required (if Last Name is not provided)

Job Title	Optional
Address	Optional
Email Address	Optional
Office Phone	Optional
Cell Phone	Optional
Fax Number	Optional
Pager Number	Optional

Radio Definition

In CASM, a radio is any mobile or portable radio equipment used by agencies for communications.

Entering data about radios involves entering data in the following areas:

1. Radio Definition

Radio Equipment Data	Notes
Radio Make (Manfacturer)	Required; options are provided
Radio Model	Required; options are provided
Quantity of Fielded Radios	Optional
Notes	Optional
Year Purchased	Optional
Quantity Purchased per year	Optional

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5.2 WebEOC (Internet-based tool)

Software Designed by ESi to bring real-time emergency information management to any size Emergency Operations Center.

A breakthrough application of web-based technology from Emergency Services integrators (ESi) puts integrated information management within the budget of any emergency operations center. This results in secure, real-time access to state and national weather trends, satellite images, mapping information, details of operations in other jurisdictions, local, regional and even national resource status and other data vital to the efficient management of any contingency (even if the jurisdiction hasn't invested in any of the sources of these data). Communication Assets Survey and Mapping (CASM) tool provides the ability for representatives of public safety agencies within an urban area or State to collect, store, and visualize data about agencies, communication assets, and how agencies use those assets. IDHS has licensed the software and has licensed each of the state's counties to use it.

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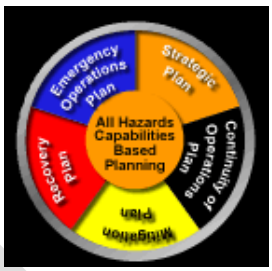
5.3 netPlanner



netPlanner is a browser enabled database application that centrally stores your Emergency Plans and allows plan stakeholders with proper login permissions to make suggestions and updates to their section of the plan. Emergency Planners may add, edit and delete the text that is submitted for their approval. The finished plan may be saved, printed and easily distributed to plan users. IDHS has licensed the software and has licensed each of the state's counties to use it. IDHS has licensed the software and has licensed each of the state's counties to use it.

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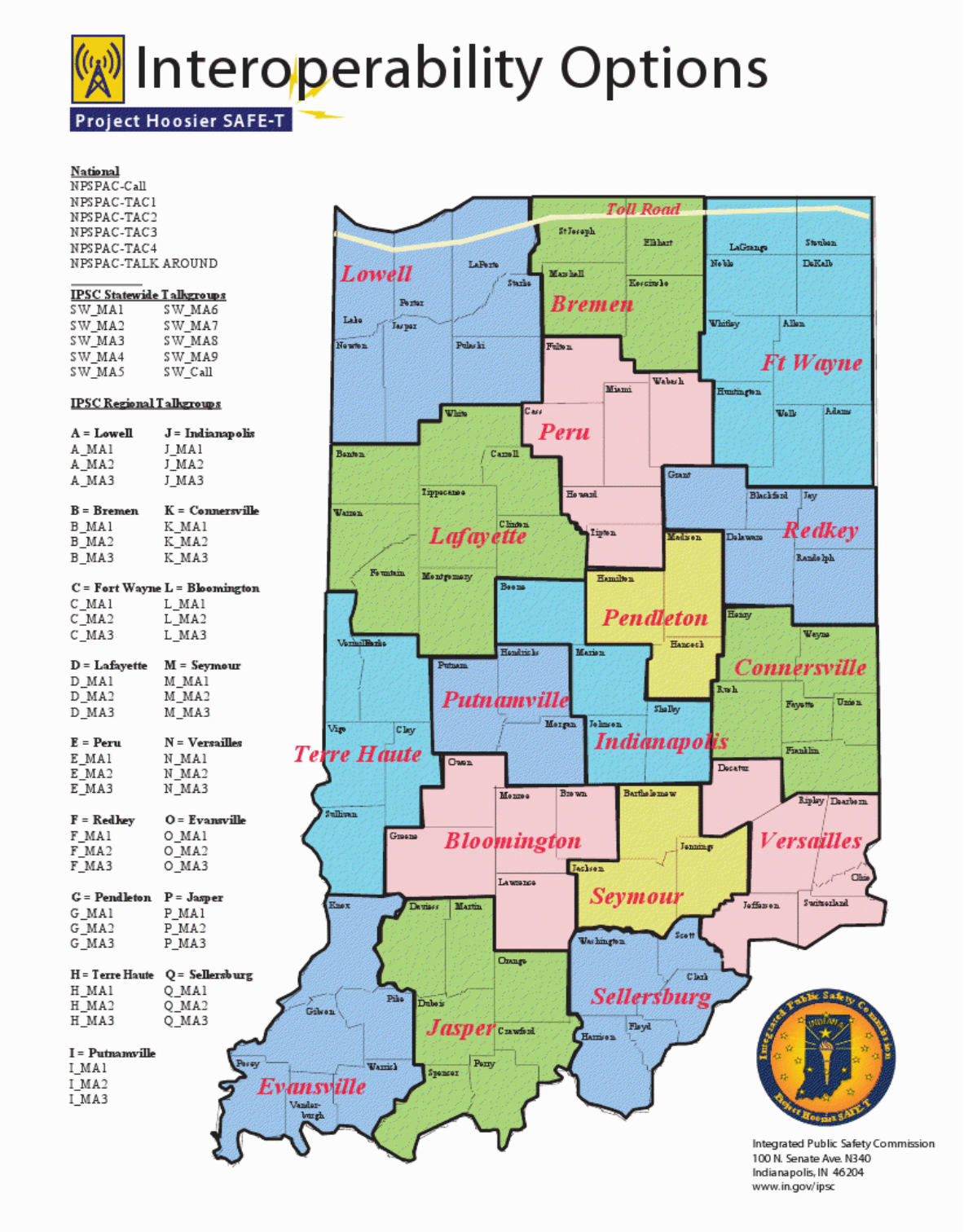
6 Indiana SAFE-T (IPSC)

Figure 7: SAFE-T Mutual Aid Districts



7 Amateur Radio

7.1 Radio Amateur Civil Emergency Service (RACES) and EMA Amateur Radio Groups Mission

Emergency communications in support of the Emergency Management function shall be the primary function of RACES and EMA Radio Groups. RACES is an organization of amateur radio operators who volunteer to provide radio communications for State and local governments in times of emergency. RACES provides essential communications and warning links to supplement State and local government assets during emergencies. RACES is a special part of the amateur operation sponsored by the Federal Emergency Management Agency (FEMA).

The mission of this group shall be as follows:

- To establish and maintain an emergency communications radio network during critical periods such as during large public events and other crisis periods
- To provide a parallel and supportive emergency communications radio system to Emergency Management Agencies, amateur radio operations at the EOC and Incident Command Posts. To provide another means of communications to the State EOC in emergencies
- To provide technical assistance, advice, and consultation as part of the planning apparatus of the Emergency Management Agency (EMA) with respect to emergency communications matters
- To provide a liaison to other emergency ham radio groups such as the Red Cross, Salvation Army, and other county organizations of this type

7.2 Leadership

Each county has an Amateur Radio Group which supports the Emergency Management function within that county and each group has some designated leader

7.2.1 Leadership Responsibilities

The responsibilities of the Leadership shall include:

- The overall direction and control of all Group activities
- The maintenance of a close working relationship with the EMA Staff
- The compliance of all Federal Communications Commission requirements
- The planning for and requisition of equipment, personnel, and software requirements necessary to support the Groups' mission

The Leadership is responsible for developing a plan for amateur radio being integrated into disaster communications and collaboration with government and non-governmental organizations.

The Leadership shall maintain a complete and accurate set of records for the organization and is responsible for the following:

- Maintain a confidential membership list with such information as is required by the EMA Director

- Issuance of identification cards to the members. Maintain a list of those members issued identification cards including the date issued and the date recalled
- Maintain a report for each operation, meeting, training session, or work party including a list of all members attending or participating
- The compilation and distribution of a current membership list
- Prepare and forward to the EMA Director an annual report summarizing all Group operations, meetings, training sessions, and work parties
- Assist with plans and programs for administrative meetings
- Serve as the liaison to any Incident Commander in times of emergencies
- The assignment of individual stations to specific duties during an operation
- Is responsible for coordinating all training with special focus on Amateur Radio License upgrading, Emergency Communications, EOC radio usage and IS-100, -200, -700 and NIMS-800 training
- Maintaining coordination with other communications organizations through the attendance of meetings, distribution of materials, and cooperation before, during, and after all emergency and joint operations
- Compiles and maintains a catalog of all EMA issued equipment and/or property. This catalog shall include the model number and serial number of each item (or other description sufficient for positive identification) and its current location
- Certifies the functionality and readiness of all equipment installed in fixed or mobile operating centers

7.3 Communications Operations

Communications Operations will be initiated under the following circumstances:

- An incident involving the loss or overwhelming of normal public safety communications
- An incident where special communications abilities which are beyond the scope of the Metropolitan Emergency Communications Agency (MECA) are needed such as High Frequency (HF), Slow-Scan TV (SSTV), and digital message trafficking
- An incident where additional communications abilities which would allow contacts between the Red Cross, Shelters, Incident Command Posts, etc.

7.4 Activation Plan

RACES and EMA Radio Groups may be activated by the following sources:

- Individual County Emergency Management Personnel

8 Private Sector Resources

In the event of a sustained interruption of service, or physical damage to the system, it may be necessary to migrate emergency operations to a different infrastructure altogether. This possibility will depend on the nature and cause of the interruption.

Options include:

- Use of cellular networks (including temporary cell sites)
- Text Messaging
- Electronic Mail
- Social Media (Facebook, Twitter, etc.)

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9 Operational Participants and Incident Command

9.1 Participating Functional Disciplines

In response to an event, the functional disciplines involved in the initial incident-scene response may include:

- Fire
- EMS (Public & Private EMS)
- Law Enforcement
- Public Health
- EMA
- Indianapolis Metro Medical Response System
- Public Utilities
- Public Works
- Public Transportation
- Non-Profit Organizations
- State Agencies
- Federal Agencies

9.2 Incident Command Structure

Incident command is required by federal law for the management of all incidents. The system allows for the addition and removal of resources necessary to effectively manage any event. Incident command allows for manageable spans of control, administrative support, planning, logistics support, and generally supports the various disciplines needed for managing problems, events, and incidents. Figure 6 illustrates the typical Incident Command System structure. Not all of the positions illustrated are needed for every incident.

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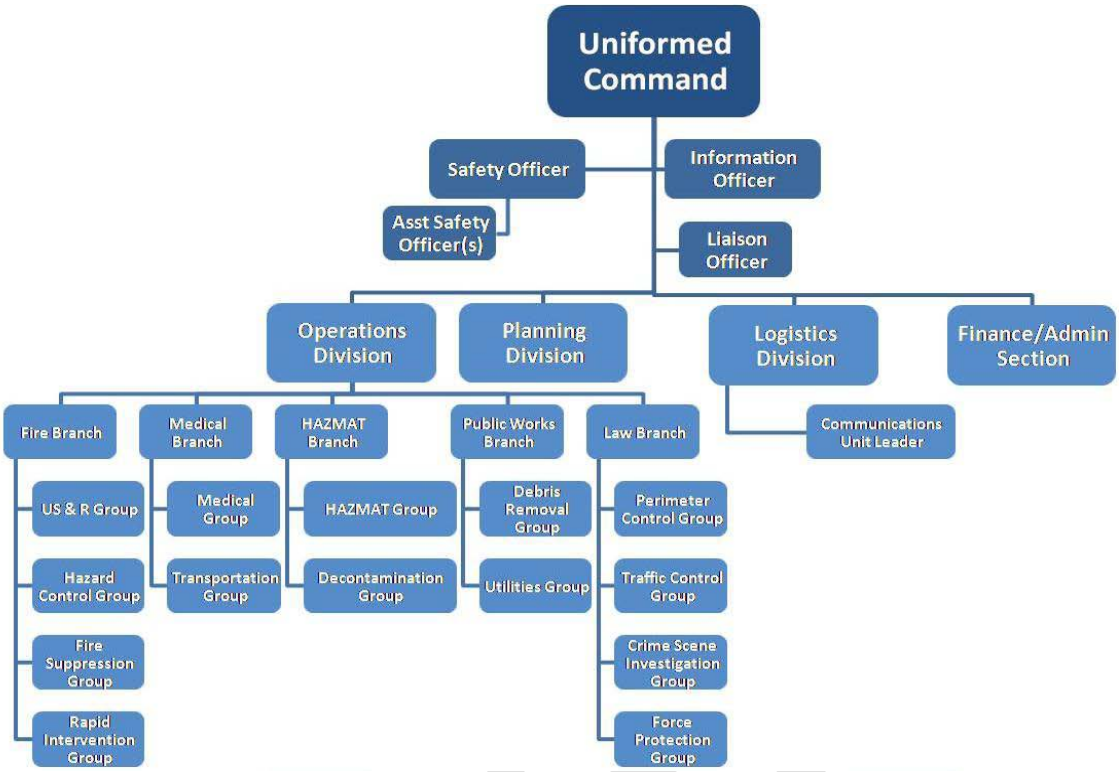
Figure 8: Incident Command System Structure



A library of Incident Command System (ICS) forms are available at http://www.training.fema.gov/EMIWeb/IS/ICSResource/ICSResCntr_Forms.htm.

The most commonly used communications form in an incident, the ICS 205: Radio Communications Plan, is included in Section 10.1: ICS Form 205.

9.3 Prioritizing Interoperable Communications

Because interoperable communications resources will be limited, a priority order must be established.

The Communication Unit Leader assigned to the event will be responsible for coordinating the interoperable communications. A guideline for the COML is:

- Large scale disasters requiring resources from outside the immediate area
- District wide disasters which involve district wide resources
- Local disasters or events which require local resources
- Scheduled events

9.3.1 Priority Users

The incident commander will have the authority to apply resources as the Incident Action Plan requires. The priority of users will be established at the time of the incident. An example order of priority is as follows:

- Unified Command Staff

- Operations Section Command
- HAZMAT
- Law Enforcement Branch
- Fire Branch
- Medical Care Group/ / Hospital Coordination
- Public Works/Utilities

9.3.2 Priority Assignment of Mutual Aid Channels

Priority assignment of mutual aid channels should be based upon the needs of each branch as determined by the scope and location of the incident. All talk groups will be monitored and coordinated through Unified Command.

9.4 Event Interoperable Communications Requirements

In an incident, interoperability of communications systems is a critical function. As a result there is redundancy built into the communications plan.

- Using the Agencies primary radio and talk groups
- Using the Agencies Regional or Statewide Mutual Aid Talk groups.
- Using the Agencies primary radio and talk groups which are patched together using either console patches or a gateway
- Using the Agencies primary radio and the NPSPAC Channels
- Using Cache radios and talk groups which are patched together using either console patches or a gateway
- Using Cache radios and the NPSPAC Channels

9.4.1 Unified Command Staff

In an incident, unless it is known that all responding agencies will be operating on the same shared communication system, the Incident Commander should immediately order the activation or use of any applicable fixed or mobile gateways through dispatch. Dispatch can work with the Communications Unit Leader to activate applicable resources.

Interoperable Communications will be attempted in the following order:

1. Co-location of all Command and General Staff at the incident command post provides the best direct communications (face-to-face) and reduces demand on interoperability resources
2. If the Command Staff and General Staff are users of a shared system, the shared system will be used to establish interoperable communications
3. If the Command Staff and General Staff operate on disparate systems, use of a mutual aid channel or a gateway solution should be attempted to establish interoperable communications
4. If no other method of interoperability can be established, the Command Staff and General Staff will relay communications through staff members

9.4.2 Operations Section Command and Branch Directors

The Operations Section in this event will need interoperable communications among section branches as determined by the scope and location of the incident. This has been identified as critical to interoperability due to the diversity of agencies involved.

If the Incident Commander has not already ordered the activation of any applicable interoperable assets, NPSPAC channels, fixed or mobile gateways, patches, etc., one of the first actions of the Communications Unit Leader during an event must be to identify these resources.

For the Operations Section Chief, applicable Branch Directors, Group Supervisors, and Unit Leaders, Interoperable Communications will be attempted in the following order:

1. If on scene field responders are users of a shared system, the shared system will be used to establish interoperable communications
2. If on scene field responders operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications
3. If on scene field responders operate on disparate systems and on different frequency bands, or common mutual aid channels are not available to establish interoperable communications, a request should be made to make use of any gateway devices (e.g. console patch, ACU-1000) which can interconnect the disparate radio systems of the agencies involved. Dispatch and the Communications Unit Leader (or their designee) will identify any available resources

9.4.3 Fire and Emergency Medical Services

Fire and EMS may need interoperable communications resources for directing triage, treatment and transport efforts. Interoperable Communications will be attempted in the following order:

1. If Fire and EMS responders are users of a shared system, the shared system will be used to establish interoperable communications
2. If Fire and EMS responders operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications
3. If Fire and EMS responders operate on disparate systems and on different frequency bands or common mutual aid channels are not available to establish interoperable communications, a request should be made to make use of any gateway devices (e.g. console patch, ACU-1000) which can interconnect the disparate radio systems of the agencies involved. Dispatch and the Communications Unit Leader (or their designee) will identify any available resources

9.4.4 Law Enforcement Branch

The Law Enforcement Branch may need interoperable communications resources for directing outer perimeter security, evacuation, explosive ordnance disposal, investigations, traffic/crowd control, and other activities as needed to support the Incident Commander. Interoperable Communications will be attempted in the following order:

1. If Law Enforcement Branch responders are users of a shared system, the shared system will be used to establish interoperable communications
2. If Law Enforcement Branch responders operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications
3. If Law Enforcement Branch responders operate on disparate systems and on different frequency bands, or common mutual aid channels are not available to establish interoperable communications, a request should be made to make use of any gateway devices (e.g. console patch, ACU-1000) which can interconnect the disparate radio systems of the agencies involved. Dispatch and the Communications Unit Leader (or their designee) will identify any available resources

9.4.5 Hospital Coordination

All area hospitals and EOCs share 800 MHz trunked system interoperability. A common hospital 800 MHz talkgroup will be used for notification of an incident. Activation of the medical position at

the EOC will be used to coordinate community medical response. Activation of voluntary and shared health care communication assets compliments interoperability.

9.4.6 Additional Support Agencies

Large scale incidents have the potential to involve multiple support agencies. Interoperable Communications should be established in the following order:

1. If additional support agencies are users of a shared system, the shared system will be used to establish interoperable communications
2. If additional support agencies operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications
3. If additional support agencies operate on disparate systems and on different frequency bands or common mutual aid channels are not available to establish interoperable communications, a request should be made to make use of any gateway devices (e.g. console patch, ACU-1000) which can interconnect the disparate radio systems of the agencies involved. Dispatch and the Communications Unit Leader (or their designee) will identify any available resources

9.5 Communications Unit Leader Responsibility

The Communications Unit Leader has the responsibility to make recommendations concerning communications structure and organization to the Incident Commander. Once approved by the Incident Commander, these actions include implementing interoperable solutions, frequencies, equipment, and systems during an actual event. The Communications Unit Leader must be part of the planning process and determine the communications resources required to support the objectives and tactics of the Incident Action Plan, as it develops.

9.6 NIMS Communications Unit Leader Training

The District Communications Committee is working with the Indiana Department of Homeland Security to coordinate training of members in the District.

9.7 Training Requirements and Certification

The Communications Unit Leaders will be trained and certified in accordance with NIMS/ ICS standards.

9.8 Communications Unit Leaders

The Committee will establish a certification program for Provisional Communications Unit Leaders. The names and contact information of Provisional Communications Unit Leaders as defined by the NIMS model are listed in each of the district appendices.

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10 Attachments

10.1 ICS Form: 205

ICS 205 RADIO COMMUNICATIONS PLAN	1. Incident/Event Name	2. Date/Time Prepared /By (Communications Unit)	3. Operational Period Date/Time

4. Talkgroup Utilization					
Agency	Talk Group	Function	Frequency/ Tone	Assignment	Remarks
Emergency Management					
Indiana DHS	IDHS DSP	IDHS Operations	800MHz	State	
Medical		EMS Operations			
Fire		Fire Dispatch			
Fire Operations		Fire Operations			Assigned by Dispatch
Police	1	Police Dispatch			
Police Operations		Police Operations			
State Police			800MHz	State	
Public Works					
INDOT					
Other Agencies					

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (Project 25)

Appendix A Glossary/Definitions

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.
AM	Administrative Manager
Audio Bridge	Connects four-wire audio from disparate radio systems to provide interoperability.
CASM	Communication Assets Survey and Mapping
CAM	Communication Assets Mapping
CAS	Communication Assets Survey
CERT	Community Emergency Response Team
COMC	Communications Coordinator
COML	Communications Unit Leader
COMT	Incident Communications Technician
Console Patching	Ability to connect channels via dispatch consoles
DHS	Department of Homeland Security
EMS	Emergency Medical Services
EOC	Emergency Operations Center
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FCC	Federal Communication Commission
IC	Incident Command
ICC	Incident Communications Center
ICALL	Calling Channel for ITAC
ICP	Incident Command Post
ICS	Incident Command System
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
ITAC	Conventional mutual aid channel 800 Mhz

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Item/Acronym	Definition
JFO	Joint Field Office
MCC	Mobile Communicaiton Center
MCU	Mobile Communications Unit
MHz	Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz.
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
Mutual Aid	Personnel, equipment, or services provided to another jurisdiction
NIMS	National Incident Management System
NPSPAC	National Public Safety Planning Advisory Committee
NSSE	National Special Security Event
POC	Point of Contact
RACES	Radio Amateur Civil Emergency Service
RADO	Radio Operator
RF	Radio Frequency
SHARES	Shared Resources High Frequency Radio Program
SOP	Standard Operating Procedure
Talkgroup	Term ususally used with trunked radio systems. A talkgroup is a predefined list of radios/users assigned a unique ID which allows them to communicate with each other over the trunked radio system.
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
UHF	Ultra High Frequency – Range of 300 to 3,000 MHz. For public safety LMR, usually refers to two bands. 380 to 460 MHz (low) and 460 to 512 MHz (high).
USCG	United States Coast Guard
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.

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Appendix B District 1 TICP
Appendix C District 2 TICP
Appendix D District 3 TICP
Appendix E District 4 TICP
Appendix F District 5 TICP
Appendix G District 6 TICP
Appendix H District 7 TICP
Appendix I District 8 TICP
Appendix J District 9 TICP
Appendix K District 10 TICP

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