ALL-HAZARDS COMMUNICATIONS UNIT SELF-PACED BRIEFING

Purpose

- This self-paced briefing provides an overview of the Communications Unit (COMU) and focuses on:
  - Its relationship to the NIMS ICS structure and the skills and expertise of its personnel
- It is intended for general audiences and responders who serve in all NIMS ICS positions.
  - This overview consists of 41 slides and take about 30 minutes to complete
  - Feel free to add your own notes and download a copy to your desktop for future reference

Briefing Overview

- **This briefing contains six modules:**
  - **The COMU and the Incident Command System**
  - **Communications Unit Positions**
  - **Incident Communications - Radio Nets**
  - **Communications Interoperability**
  - **Office of Emergency Communications**
  - **OEC Technical Assistance**

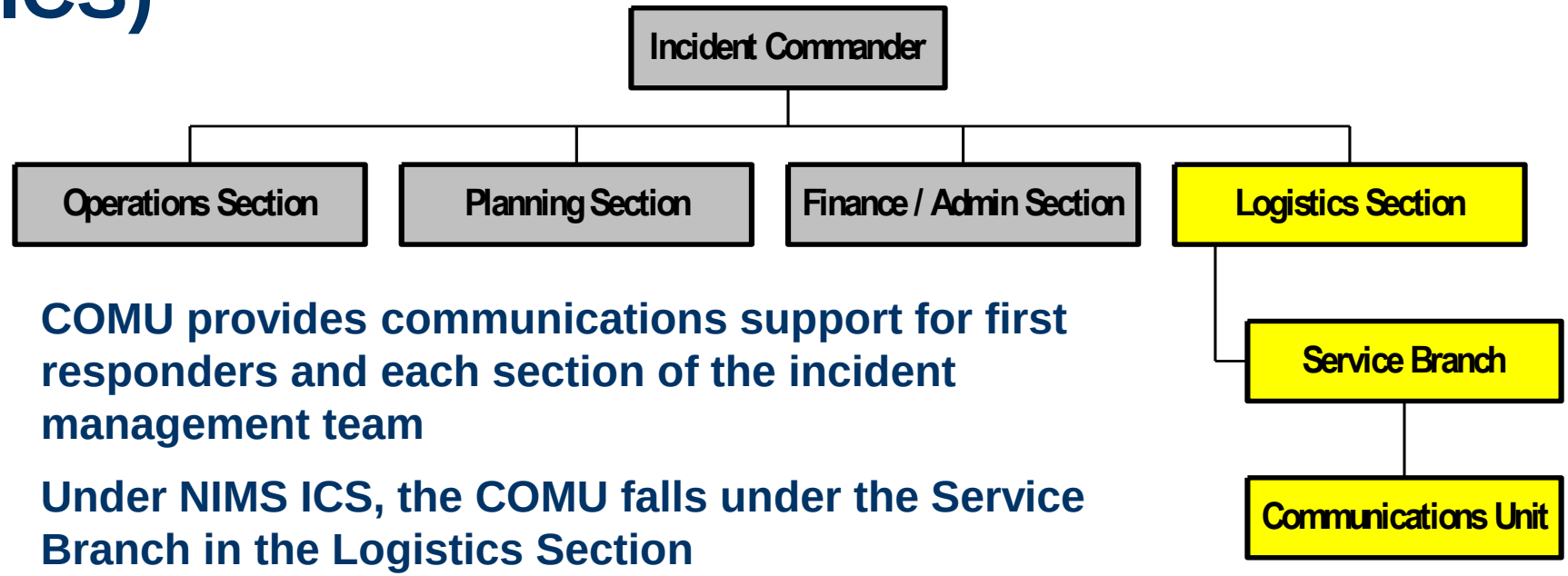
For detailed information about the Communications Unit please go to:
http://www.publicsafetytools.info/training/training_comu_info.php

The Communications Unit and ICS

Benefits of the Communications Unit

- After action reports (AARs) from major incidents showed that communications was a significant issue in a majority of incidents.
- Experience shows that a Communications Unit (COMU) greatly improves responders' ability to communicate.
- Because of their training and expertise, COMU personnel enhance response effectiveness by:
  - Increasing safety and reducing risk through improved communications up, down, and across the incident command system
  - Improving radio interoperability
  - Efficiently tracking the allocation of resources
  - Eliminating burdens on the communications center and dispatch operations

COMU in the Incident Command System (ICS)



- COMU provides communications support for first responders and each section of the incident management team
- Under NIMS ICS, the COMU falls under the Service Branch in the Logistics Section
- COMU is managed by a Communications Unit Leader (COML)
  - Logistics Section Chief or Incident Commander may manage COMU until additional communication resources arrive on-scene

Communications Unit Positions

Communications Unit Leader (COML)

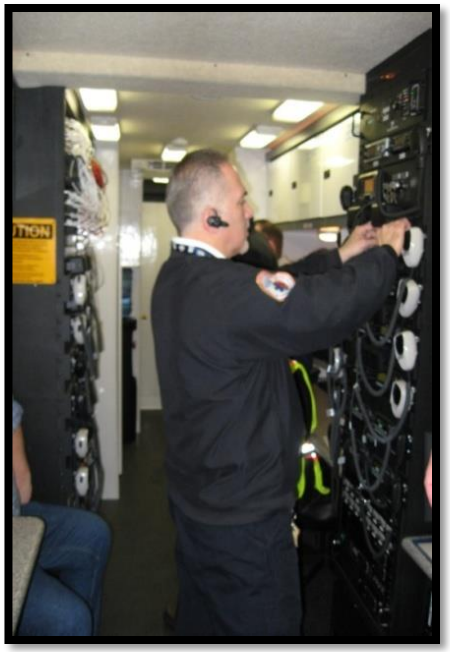
- **Communications Unit Leader is responsible for:**
  - **Developing plans for the effective use of incident communications equipment and facilities**
  - **Installing and testing communications equipment**
  - **Distribution of communications equipment to incident personnel**
  - **Supervision of the incident communications center and other COMU personnel:**
    - **Incident Communications Center Manager (INCM)**
    - **Communications Technician (COMT)**
    - **Radio Operator (RADO)**
    - **Technical Specialist (THSP), for example:**
      - **Incident Tactical Dispatcher / Incident Dispatch Teams**
      - **Auxiliary Emergency Communicator**

Incident Communications Center Manager (INCM)

- Establish, supervise and manage the Incident Communications Center (ICC)
- Supervise Radio Operators
- Assist the COML with:
  - Maintaining equipment accountability and inventories
  - Implementing a document filing system
  - Ensuring information regarding communications restrictions or coverage limitations is disseminated to operations and ICC personnel
  - Reporting network malfunctions to the COML or COMT

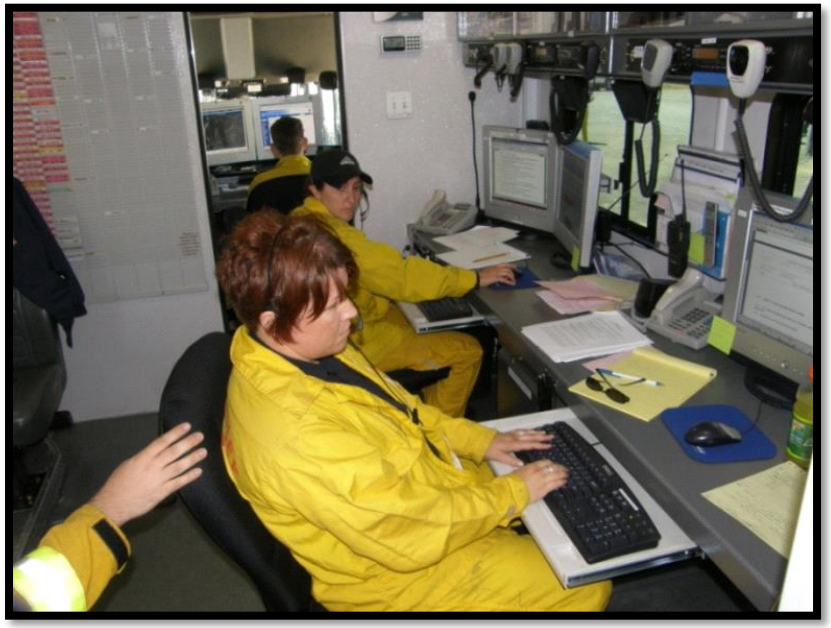
Communications Technician (COMT)

- COMT is responsible for supporting the technical activities of the Communications Unit.
- For example, the COMT:
  - Assists COML in developing ICS 205 Incident Radio Communications Plan
  - Maintains, repairs communications equipment
  - Ensures radio/system coverage
  - Provides for equipment distribution
  - Tracks equipment
  - Programs radios
  - Manages gateways
  - Manages radio cache



Radio Operator (RADO)

- The immediate supervisor for the RADO is the INCM. In the absence of an INCM, the COML will supervise the RADO position
- The primary responsibility of the RADO is to pass accurate and timely information from the sender to the receiver and follow through with an accurate and timely response to the sender if needed

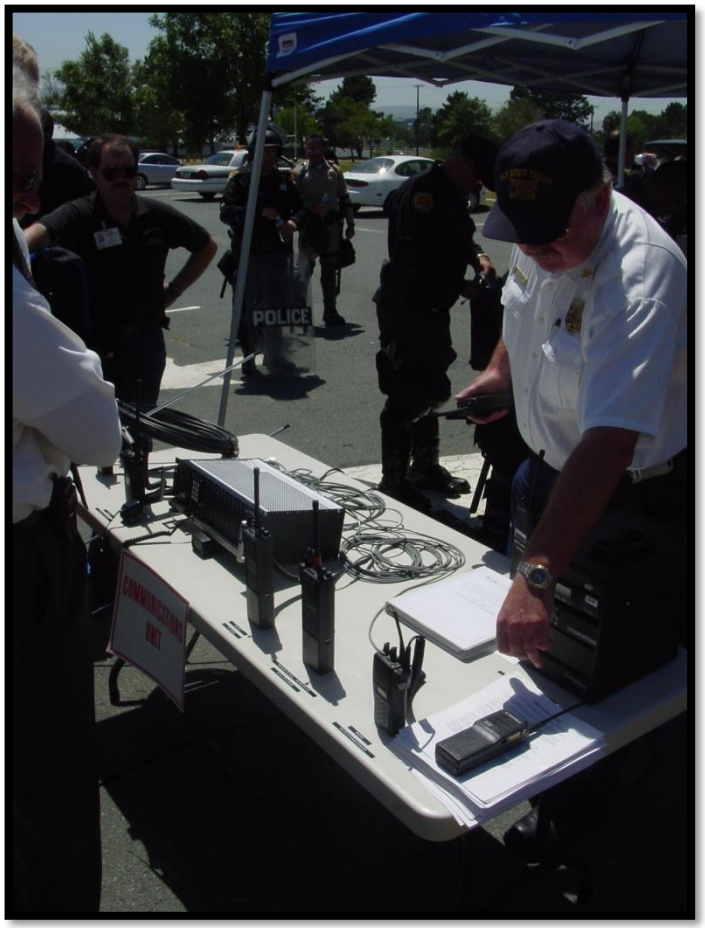


Technical Specialists (THSP)

- THSP is catch-all a position in the Incident Command System for any specialized skill such as the installation, operation and maintenance of specific communications equipment and modes of operations that are unique to the incident response efforts' communications requirements.
- The following are examples that support a COMU:
  - Information Technology (IT) Specialist
  - Local Agency Radio Technicians (not qualified as a COMT)
  - Telephone Technical Specialist
  - Gateway Specialist
  - Mobile Communications Center Specialist
  - Cache Radio Specialist
  - Incident Dispatcher
  - Auxiliary Emergency Communicator

Incident Dispatcher

- An Incident Dispatcher is a specially trained individual qualified to operate away from the dispatch center in a command post, base camp or at the incident scene
- Incident Dispatchers may support the communication unit as a single resource or as part of an Incident Dispatch Team.



Auxiliary Emergency Communicator

- **Auxiliary Emergency Communicators are volunteers who are typically licensed Amateur Radio Operators with a public safety background and are trained in NIMS/ICS. They can be used as Subject Matter Experts regarding:**
  - **Antennas**
  - **Repeaters**
  - **Propagation**
  - **Radio systems set-up**
  - **High Frequency (HF), Very High Frequency (VHF), and Ultra-High Frequency radio networks.**
  - **Computer networks**

Incident Communications - Radio Nets

Overview of Radio Nets

- The COMU establishes radio networks or nets to support various types of incident communications
- According to NIMS there are typically five nets that may be deployed on an incident:
  - Command Net
  - Tactical Net
  - Air-to-Ground Net
  - Air-to-Air Net
  - Logistics Net

Command Net

- The Command Net may be used by Command and General Staff. More often it is a coordination channel for the Operations Section Chief, Logistics Section Chief and the Incident Commander
- Usually only one Command Net is used during an incident
- Interoperability may be achieved on the Command Net by utilizing an audio gateway when personnel are on disparate radio systems
- The Command Net also provides a link between Command and General Staff positions, the Incident Commander and the Dispatch Center

Tactical Net

- There may be several tactical nets at the Division/Group level
- Examples of tactical nets:
  - Fire
  - Law Enforcement
  - Emergency Medical Services
  - Emergency Management
  - Explosive Ordnance Disposal
  - HAZMAT
  - Transportation
  - Utilities
  - Public Works
  - Public Health
  - Military
  - Schools
  - Environmental Health
  - Urban Search and Rescue

Air-to-Ground Net

- Used to coordinate air support during an incident.
- Air-to-Ground Nets are typically FM public safety frequencies.
- Allocated according to function, for example, deck control, takeoff, landing.

Air-to-Air Net

- Governed by FCC regulations and FAA procedures
- Air-to-air frequencies are operated by the Air Branch
- All frequencies are coordinated by the COML

Logistics Net

- The logistics net is used to coordinate support activities for the Logistics Section
- Groups on this net may include:
  - Facilities/Base/Camps
  - Ground Support/Transportation
  - Security
  - Communications Unit
  - Supply Unit
  - Medical Unit
  - Food Unit

Communications Interoperability

Importance of Radio Interoperability

Emergency responders - police officers, fire personnel, and emergency medical services - need to communicate across disciplines and jurisdictions to successfully manage routine and large-scale emergencies.

When responders cannot communicate with their own agencies or across jurisdictions, inadequate response can jeopardize lives.

Interoperable Communications

SAFECOM Definition:

The ability of Public Safety responders to share information via voice and data communications systems on demand, in real time, when needed, and as authorized.

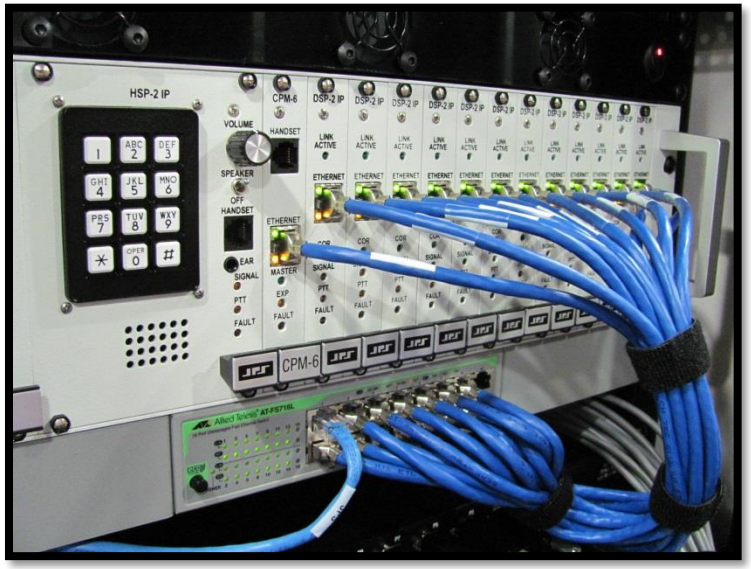
- **A lack of radio interoperability during a incident can have a negative impact on the effectiveness of command, situational awareness and the safety of first responders**
- **Interoperability is NOT the ability to talk with everyone all of the time!**
- **To achieve interoperability agencies should focus on:**
  - **Governance**
  - **Standard Operating Procedures (SOPs)**
  - **Technology**
  - **Training/Exercises**
  - **Regular Usage**

Interoperability Solutions - Cache Radios

- Cache radios (swap radios):
  - Both large and small caches have great utility
  - Small caches can be agile
    - Six portable radios in the back of a police sergeant's car can be deployed quickly to fill gaps in interoperability
  - Large caches can quickly solve interoperability challenges
    - A large response area, encryption, and disparate radio systems can make interoperability a significant challenge
    - A large radio cache can be used to solve interoperability problems by issuing common radios to all first responders assigned to the incident

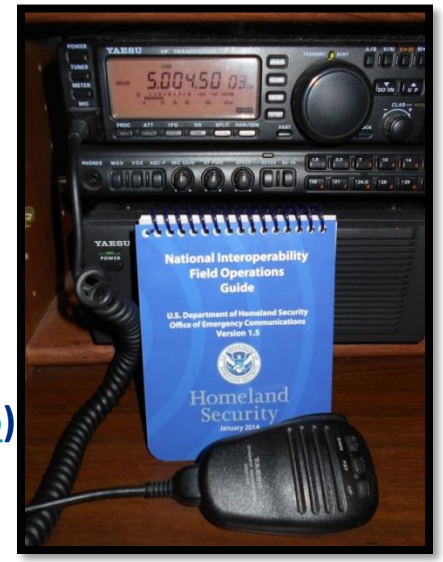
Interoperability Solutions - Gateway Systems

- Gateway systems interconnect channels of disparate systems
  - Fixed gateways, such as console patches, are in use in many dispatch centers
  - Mobile, portable, or transportable gateways may require technical support or a trained radio technician to operate



Interoperability Solutions

- FCC and NTIA regulations and interoperability guidelines
- National interoperability channels include:
  - A common set of frequencies used by first responders in all 56 states and territories to achieve interoperability in the primary public safety bands:
    - VHF
    - UHF
    - 700 MHz
    - 800 MHz
- National Interoperability Field Operations Guide (NIFOG)
  - Describes uses/availability of national interoperability channels
  - Produced and distributed by OEC (www.publicsafetytools.info)



Office of Emergency Communications

Office of Emergency Communications

Mission: OEC supports and promotes communications capabilities used by emergency responders and government officials to keep America safe, secure, and resilient.

OEC Priority Telephone Systems

- Government Emergency Telecommunications Service (GETS)
  - Priority access to the public wireline network
  - GETS is supported by all major service providers
- Wireless Priority Service (WPS)
  - Priority access to the public wireless network
  - WPS is available through AT&T, CellCom, C Spire, GCI, Southern LINC, Sprint, T-Mobile, Verizon
- Telecommunications Service Priority (TSP)
  - Establishes priority for restoration/provisioning of circuits
  - Supported by an FCC regulatory mandate

Government Emergency Telecommunications Service (GETS)

- No cost calling card that provides priority for outbound calls to all regular telephone numbers
- Available to first responders, essential government services, and to critical infrastructure resources sponsored by a federal agency
- Uses the capacity of the public network, not a separate system
- Mitigates cellular congestion when calling TO a cellular phone if on a WPS carrier network

- Caveats:
  - GETS will not work without a dial tone
  - GETS may experience soundless delays while queuing
  - GETS does not mitigate cellular congestion made from a cellular phone

Wireless Priority Service (WPS)

- WPS provides priority for emergency calls made from cell phones/smart phones
- Available to first responders, essential government services, and to critical infrastructure resources sponsored by a federal agency
- WPS feature is added on a per-phone basis for AT&T, CellCom, C Spire, GCI, Southern LINC, Sprint, T-Mobile, and Verizon Wireless

- Caveats:
  - WPS will not work without a signal
  - Users may experience waits up to 28 seconds
  - WPS will not offer priority when roaming on a non WPS carrier
  - 9-1-1 loses geo locator data

Telecommunications Service Priority (TSP)

TSP contains two primary and distinctive components:

Provisioning

- **TSP authorizes priority installation of new voice and data circuits**
- **Available for local, state, tribal, and federal facilities that support emergency response activities**
- **Cannot be used to compensate for inadequate planning**

Restoration

- **Organizations designate critical circuits to have priority repair and restoration if damaged**
- **Available for local, state, tribal, and federal facilities that support emergency response activities or private entities that support critical infrastructure or key resources**
- **Repaired before non-TSP circuits**
- **Circuits must be registered with TSP prior to requesting priority restoration**

OEC Technical Assistance

OEC - COML & COMT Training

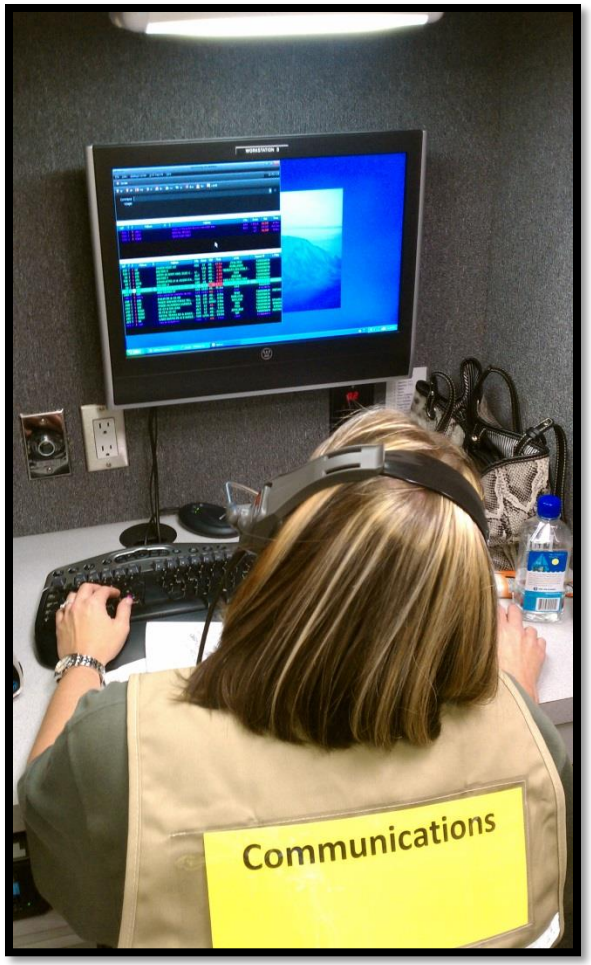
- Communications Unit Leader (COML)
  - Three day course prepares students for the All-Hazards COML position.
  - Training includes mobilization, interoperable communications, communications planning, demobilization, personnel and resource management.
  - Students receive all-hazards position task books
- Communications Technician (COMT)
  - Five day course prepares students for the All-Hazards COMT position.
  - Training includes mobilization, interoperable communications, gateway technology awareness, telephone and satellite systems awareness, computer and IP network technology awareness and demobilization
  - Students receive all-hazards position task books

OEC - INCM, RADO, AUXCOMM Training

- **Incident Communications Center Manager (INCM)**
  - **Three day course prepares COMLs, Dispatch Supervisors and public safety communication professionals for managing all functions in the Incident Communications Center.**
- **Radio Operator (RADO)**
  - **Three day course introduces public safety professionals and support personnel to various Radio Operator concepts including radio etiquette, interoperable communications, dispatch operations and emergency communications procedures.**
- **Auxiliary Communications (AUXCOMM)**
  - **Two day workshop familiarizes amateur radio operators and others to support an incident communications center, emergency operations center, hospital and/or public safety emergency response entities.**

OEC - IDT (Incident Dispatcher) Training

- **Incident Dispatcher**
  - **Three day course provides a realistic, hands-on approach to mastering the tasks and skills of an incident dispatcher. This course is designed for experienced dispatchers who are familiar with the incident command system and dispatch operations.**



Other COMU Resources

- OEC offers a state-sponsored, OEC recognized instructor program
- OEC also offers:
  - COML and COMT train the trainer courses
  - Drills/exercises to support completion of position task books

- For course descriptions and prerequisites, go to the OEC Technical Assistance/SCIP Catalog at:

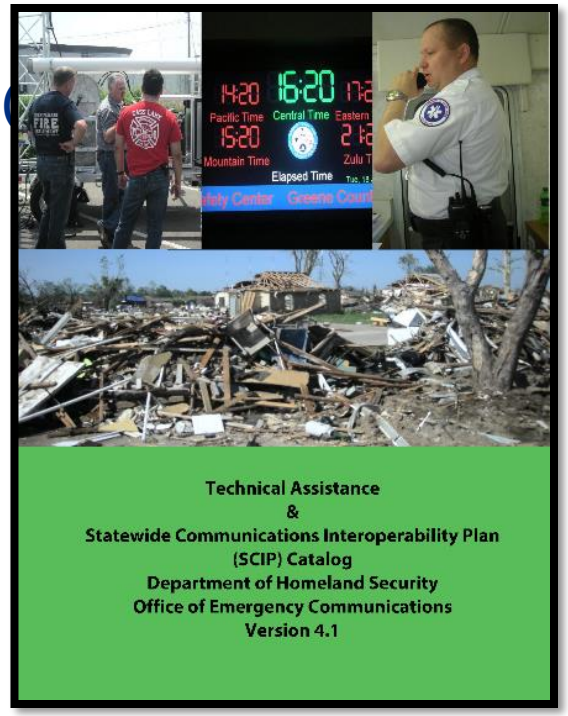
www.publicsafetytools.info

OEC Technical Assistance

- All OEC technical assistance offerings are provided at no cost to the state/territory
- Technical assistance requests for state and local governments should be coordinated through a Statewide Interoperability Coordinator (SWIC)

OEC service offerings include:

- Statewide Communications Interoperability Planning (
- Governance
- (SOP) and Communications Support
- Communications Unit Training and Support
- Communications Exercise and Operational Support
- Broadband Support
- NG 9-1-1 and Dispatch Operations
- Communications Systems Engineering Support
- Tactical Communications Enhancement Support
- Regional Communications Enhancement Support
- Tribal Nation
- Communication Assets Survey and Mapping (CASM)



Contact Information

For more information about the communications unit, OEC communications unit training and communications unit resources please visit:

www.publicsafetytools.info

or contact:

COMU@hq.dhs.gov

Homeland Security