

**MODOC OPERATIONAL AREA**  
**INTEROPERABLE COMMUNICATIONS**  
**ANNEX**



**Approved**  
**Disaster Council**  
**June, 2009**  
**Revised, January, 2013**  
**Reviewed, 2015**  
**Approved Board of Supervisors, February 9, 2016**

## Table of Contents

- 1. Introduction**
  - 1.1 Purpose
  - 1.2 Scope
- 2. Situation and Assumptions**
  - 2.1 Situation
  - 2.2 Assumptions
  - 2.3 Authorities
- 3. Concept of Operations**
  - 3.1 Preparedness
    - 3.1.1 Public Safety Answering Point: Modoc Communications Center/911
    - 3.1.2 Local Government (LG) Radio System
      - 3.1.2.a Frequencies
      - 3.1.2.b Portable Radios
    - 3.1.3 Telephonic Communications
      - 3.1.3.a Cellular Phones
      - 3.1.3.b Satellite Phones
    - 3.1.4 Internet Resources
    - 3.1.5 WebEOC
    - 3.1.6 Amateur Radio Emergency Services (ARES)
  - 3.2 Response
    - 3.2.1 Initial Actions
    - 3.2.2 Communications Resources
    - 3.2.3 Ongoing Response Actions
  - 3.3 Recovery
    - 3.3.1 Overview
    - 3.3.2 Documentation
    - 3.3.3 After-Action Report (AAR)
  - 3.4 Mitigation
- 4. Organization: Coordination and Control**
  - 4.1 Roles and Responsibilities of Governmental Agencies
    - 4.1.1 Modoc Sheriff's Office and Office of Emergency Services
    - 4.1.2 Emergency Operations Center
    - 4.1.3 Local Government Departments
  - 4.2 Operational Area Jurisdictions
  - 4.3 Local Non-governmental Agencies
    - 4.3.1 Amateur Radio Emergency Services (ARES)
- 5. Administration**
  - 5.1 Planning
  - 5.2 Logistics
  - 5.3 Finance
- 6. Development and Maintenance**
- 7. Appendices**
  - 7.1 Forms
    - 7.1.a ICS Communications Plan ICS 205

# INTEROPERABLE COMMUNICATIONS ANNEX

## 1. Introduction

Communications capability is the fundamental ability to talk to one another. This capability includes:

- Operability – sufficient communications resources for response agencies to meet routine internal and emergency communication requirements.
- Interoperability – the ability to communicate across agency and jurisdictional lines to exchange voice, data, and/or video on demand, in real time, when needed, and when authorized.

Communication during emergency incidents is critical. As incidents expand and more assets or resources are deployed, ensuring interoperable communications is even more challenging and necessary, since not all systems may be accessible. Efforts must be taken to ensure common understanding of terms and language, as well as to ensure the fundamental capacity to transmit across diverse systems, through multiple jurisdictions, and among varied types of work groups; i.e. public, private and non-profit organizations.

As established under the Incident Command System, communications and incident action plans need to be integrated to capture management goals and operational objectives. Integration of supporting services and technologies is critical to effective incident response. Since responder safety and effectiveness are closely related to how well communications supports them, the capabilities and capacity of systems to support operations will be continuously taken into account during incident action planning.

### 1.1 Purpose

The Interoperable Communications Annex is a part of Modoc County Emergency Operations Plan, 2015. The purpose of this annex is to:

- Support, and if necessary, restore the communications infrastructure
- Coordinate communications across jurisdictions and agencies to support incident response efforts
- Facilitate the delivery of information to emergency management decision makers
- Facilitate and coordinate communications within the county, with state, federal, and regional agencies, with commercial communications' operations, and with volunteer communication organizations.
- Establish the priority of telecommunications services at incident support facilities, provide capabilities and services to aid response and short-term recovery operations, and coordinate transition to long-term recovery efforts.

## **1.2 Scope**

In order to meet the interoperable telecommunications needs of the operational area, the Modoc County Sheriff's Office and the Office of Emergency Services will coordinate the standards for acquisition of equipment and systems for interoperable communications within the multiple jurisdictions within the operational area. Telecommunications support will include planning and training with state and federal agencies; county departments; commercially leased operations; and non-governmental agencies that respond to emergencies. Each agency in the Operational Area retains the right to decide when and where to participate in interoperable communications.

## **2.0 Situations and Assumptions**

### **2.1 Situation**

The Modoc Operational Area (MOA) encompasses approximately 4000 square miles. It is an area dissected by three mountain ranges with valley floors at the 4000 foot range and the highest mountain rising to nearly 10,000 feet. The one incorporated city within the MOA is Alturas, with approximately thirty percent of the population. The rest of the population is dispersed in small, unincorporated towns and rural subdivisions.

This situation provides a major challenge for communications even with an unlimited budget. With approximately eighty-two percent of the land base of the county in federal and state ownership, the tax base provides insufficient revenues for county government to establish infrastructure.

Because of the isolation of the MOA, telephonic communication is very vulnerable to failure, due to the lack of alternate paths. The commercial carriers lack any form of redundancy due to interoperability within their systems. The problem is that all telephonic communications are dependent on the efficacy of the commercial carriers.

### **2.2 Assumptions**

- In an emergency, Modoc County's Emergency Operations Center will be activated to coordinate resources and communication response between jurisdictions and regional agencies.
- Modoc County's one primary Public Safety Answering Point (PSAP) is the Modoc Communications Center/911 (MCC/911) located in the Sheriff's Office.

- The City of Alturas is the only incorporated city within the MOA; the city has its own law enforcement and fire department. During the day, law enforcement maintains a dispatch center. It transfers all dispatch calls to MCC/911 after 5:00 p.m., holidays and weekends. Alturas Fire Department always dispatches under MCC/911.
- There are thirteen Fire Districts within the MOA other than the City of Alturas that coordinate communications operations with the Sheriff's Office.
- Weather and other environmental factors may restrict mobile or transportable communications equipment movement into an affected area.
- Significant portions of the emergency communications systems in the area may become overwhelmed or inoperable during an emergency situation.
- During emergencies, telephone companies may impose line-load limit controls capable of creating use-overload conditions that would result in jammed circuits.
- State and/or Federal assistance may be necessary to procure supplemental communications equipment and/or personnel.
- In the event the Operational Area EOC must be relocated, the County has the Mobile Communications Trailer available to support EOC communications operations.

### **2.3 Authorities**

Legal references listed in this annex are in addition to those listed in the Modoc County Emergency Operations Plan, 2015.

- Federal Communications Commission Regulations, Title 47, Code of Federal Regulations.
- National Emergency Communications Plan (DHS, 2008)
- California Statewide Communications Interoperability Plan (CalOES, 2013)

### **3. Concept of Operations**

The Modoc County Sheriff's Office is responsible for emergency communications within the MOA. That responsibility includes planning that addresses acquisition and maintenance of equipment and systems; interoperability; redundancy; response; and coordination of resources with law enforcement, medical, fire, state and federal jurisdictions. In an emergency, the Emergency Operations Center (EOC) will become the central point of coordination and control of emergency management communications. The EOC will also coordinate with state, federal, and mutual aid partners as the situation warrants.

The 911 communications system includes law enforcement radio dispatch to individual patrol cars and portable radios, telephonic communications and/or text messaging, computer aided dispatch (CAD), and Geographic Information System (GIS) to all law enforcement, medical, fire, and EMS.

In the initial stages of an emergency, the EOC will focus on lifesaving activities. It will work toward re-establishing communications operability as the situation changes. The Sheriff's Office strives for redundancy with multiple systems that utilize satellites, phone lines, radio, and internet connectivity, as well as utilizing auxiliary systems such as HAM radios as warranted.

### **3.1 Preparedness**

The Modoc Sheriff's Office is responsible for coordinating and developing communication resources that include personnel, systems, and equipment that function on a 24-hour-a-day basis for law, fire, and EMS agencies. Assessment of functionality is ongoing; it includes county operations as well as coordinating systems with the City of Alturas, thirteen fire protection districts, and two medical facilities. Acquisition of equipment is coordinated for interoperability and redundancy.

Other agencies and jurisdictions within the MOA will coordinate their acquisition of equipment to ensure interoperability and redundancy. Each agency within the MOA retains the right to decide when and where to participate in interoperable communications. The procedures for operating equipment and training will be established and maintained by each agency, and when feasible, agencies will coordinate with Modoc Office of Emergency Services (OES) to train and exercise.

#### **3.1.1 Public Safety Answering Point: Modoc Communications Center/911**

Modoc County has one primary Public Safety Answering Point (PSAP) located at the Sheriff's Office. Modoc uses the dispatch and communications system for 24 hour tactical communications operations. It is responsible for, but not limited to, the following:

- Activate dispatch/notification protocols for appropriate responders
- Maintain communication with the Incident Commander
- Relay critical information to responders on their operating channels
- Maintain a log of communications including requests for, and efforts to, coordinate resource requests
- If at all possible, maintain normal 911/Dispatch Center communication services for the duration of an emergency

#### **3.1.2 Local Government (LG) Radio System**

The **LG** radio system has multiple mountain top repeaters controlled by a 400 MHz link. These systems have wide interoperable capacity although some limitations do exist within certain geographic areas. The LG radio system provides 85% handheld coverage within the inhabited areas of the county.

Green Command provides secondary coverage in case LG radio system is down, as well as separating radio traffic in major incidents.

### **3.1.2.a Frequencies**

Modoc County Communications Center/911 monitors all radio traffic. The Sheriff's Office has multiple frequencies licensed to be used within the MOA. All Emergency First Responders operate on Local Government (LG) radio system. However, operations can be changed between Tactical (Tac) channels and alternate repeater sites. Jurisdictions have flexibility in changing frequency for interoperability.

### **3.1.2.b Portable Radios**

There are multiple caches of VHF and UHF radios caches which can be used in an emergency.

### **3.1.3 Telephonic Communications**

One wired carrier and two cellular companies serve the greater MOA. Frontier Communications system serves most of the MOA with the infrastructure comprised of microwave and fiber optics. Century Communications and California-Oregon Telephone serve the New Pine Creek and Newell areas respectively. US Cellular and Verizon are the licensed cellular carriers. Verizon's cellular system is totally dependent on Frontier for connectivity within, and outside, of the MOA. With the exception of Surprise Valley, all US Cellular's site connectivity is a microwave system back to Medford, Oregon, independent of Frontier Communications. No new carriers have requested licensing for Modoc County.

The copper wire network in the City of Alturas has one cable path to the Sheriff's Office for emergency, non-emergency and 911 trunks.

### **3.1.3.a Cellular Phones**

Modoc Sheriff's Office patrol and emergency managers carry departmental cellular phones. These are also used for text messages and emails and at times are more functional than voice.

### **3.1.3.b Satellite Phones**

Satellite phones may be distributed during a disaster/emergency as necessary to best secure effective communications. The MOA has eight OASIS satellite phone lines available. Five of these lines are configured for voice and three for data. These provide vital connectivity outside the area and are of low quality voice communications. During any incapacitation of the commercial system, these telephone lines will be vital to the operation of the MOA.

#### **3.1.4 Internet Resources**

Within Modoc County there are multiple internet providers. The main service for the County is through Frontier Communications. In an emergency, if Frontier is down, redundancy is built in with wireless broadband that is routed through Century Telecommunication out of Oregon. In addition, the EOC has access through the OASIS satellite system, as part of CalOES. OASIS is a State of California owned satellite system established to provide Emergency Management voice and data communications independently of commercial networks.

#### **3.1.5 WebEOC**

WebEOC is a proprietary, internet-based communications and coordination software used to support Modoc EOC in communication with California State EOC and the Office of Emergency Services. This California State system standardizes emergency agency response. It improves communications, common operating picture, situational awareness and integration of emergency management across the region and state.

#### **3.1.6 Amateur Radio Emergency Services (ARES)**

During a disaster/emergency, the services of ARES may be requested as a resource. ARES can provide auxiliary radio communications for first responders, hospitals, the EOC, and other support agencies. The Sheriff's Office maintains a Memorandum of Understanding for those services. ARES volunteers will be certified radio operators and also designated as Disaster Service Workers.

### **3.2 Response**

#### **3.2.1 Initial Actions**

The Sheriff, as Director of Emergency Services, or his designee, will activate the Emergency Operations Center. The role of the EOC is to identify communication requirements, prioritize these requirements, and develop a plan to acquire and deploy communications equipment

to meet the needs of the County in order to maintain continuity of operations and emergency response.

Individual departments, agencies, and private communications providers will provide liaison personnel to the EOC as requested.

The EOC will coordinate resources to maintain interoperability between jurisdictions, utilizing a variety of communications tools to provide clear communications and redundancy when possible.

The Incident Commander will appoint a Communications Unit Leader under the Logistics Section as outlined in the 2015 Modoc Emergency Operations Plan. The Communications Leader will follow the functional checklist as delineated.

### **3.2.2 Communications Resources**

The Communications Leader may utilize and, or all, of the following resources in any configuration.

- UHF radio repeater system including base, mobile and portable radios. This is a backup communications system. These radios also include the national interoperable frequencies.
- VHF radio frequencies including base, mobile and portable radios. These radios also include the national interoperable frequencies.
- WebEOC to communicate with state and regional emergency response organizations.
- Mobile Dispatch and Communications vans are available for temporary communications sites.
- Cellular telephone systems to include voice, email and text.
- Satellite telephones and satellite data systems.
- Amateur Radio Emergency Service (ARES) including HF, VHF, UHF and data frequencies.
- Computer technology and dedicated/common user wire, cellular, and satellite telephone systems.

### **3.2.3 Ongoing Response Actions**

The Incident Command, Command Staff, and EOC will:

- Develop and ICS-205 Incident Radio Communications Plan for Incident Commander and EOC.
- Conduct an assessment report of the situation's communications' issues.
- Prioritize a list of objective based actions to support lifesaving and short-term recovery operations. This list shall be revised as the situation changes.
- Mobilize resources and coordinate communications support for all responding agencies to achieve prioritized actions. This includes

allocations of resources, both personnel and equipment. It may also include request for resources outside of the jurisdictional area.

- Coordinate with commercial telecommunications providers to assess the situation for recovery of service and prioritize needed actions.
- Support notification and coordination of communications needs with state and regional agencies.
- Monitor WebEOC and be prepared to coordinate any request for Communications support.
- Monitor the situation and prepare timely briefings and reports as situation changes

### **3.3 Recovery**

#### **3.3.1 Overview**

Emergency communications are defined as those that are utilized when regular government or commercial applications have failed or been severely compromised. Emergency communications actions are meant to be of limited duration. As the timeline of the incident progresses, there is a continuous gradual transition from emergency systems back to regular communications. At some point in the timeline, the availability of regular communications overtakes the necessity for emergency communications, signaling the transition from emergency response to recovery. The following actions should be considered.

- Assess state of operational systems: including, but not limited to land-line telephone service, cellular telephonic networks, land mobile radio systems, and internet services.
- Conduct damage assessment for all systems and coordinate procurement and distribution of equipment.
- Coordinate with operational area telecommunications providers and provide support as needed.
- Create a long-term recovery plan that prioritizes the deployment of services based on available resources and critical needs.
- Participate in the After-Action Review and include recommendations in a long-term recovery plan

#### **3.3.2 Documentation**

- All personnel will only function under the direction of the Incident Command System
- Response units will document personnel hours, expenditures, etc. with resource numbers provided by the EOC, using ICS forms
- All forms approved for this annex will be used and submitted daily by responding teams/agencies
- All staff: County, private or public agencies, and volunteers will complete Incident Command (ICS) 214 Activity Logs

### **3.3.3 After-Action Report (AAR)**

Following protocol as outlined in the 2015 EOP, After Action Reporting/Improvement Plan will occur with subsequent modifications as recommended

### **3.4 Mitigation**

Communications is the backbone of any emergency response. It is imperative that it be interoperable between jurisdictions in the operational area. It also will require redundancy to provide backup for primary systems and address the varied needs of different geographical areas. The goal of interoperability and redundancy is acquired over a long term planning and acquisition process.

Planning is ongoing and a primary function of the Office of Emergency Services. It is aided through various grants from FEMA and CalOES.

The multiple communications systems used by Modoc Sheriff's Office and the Office of Emergency Services are ongoing and ever-changing. Training and exercising are ongoing and require commitment from all jurisdictions.

## **4. Organization: Coordination and Control**

### **4.1 Roles and Responsibilities of Governmental Agencies**

#### **4.1.1 Modoc Sheriff's Office and Office of Emergency Services**

The lead agency for emergency operations and communications is the Modoc Sheriff's Office and the Office of Emergency Services. It has operational oversight of all communications-related activities in the MOA. That responsibility as the primary agency includes 24/7 daily, non-emergency operations; emergency communications; coordination and deployment of communication operations for the Modoc Operational Area and participating jurisdictions; and standards for equipment acquisition and training.

A fundamental assumption, as stated in 2015 Modoc Emergency Operations Plan (EOP) is that all responders will follow National Incident Management System (NIMS) Incident Command System (ICS), and California Standardized Emergency Management System (SEMS).

#### **4.1.2 Emergency Operations Center**

In an emergency, the responsibilities of the EOC are to coordinate resources in support of planning, operations, logistics. It also documents finance and administration functions in an emergency. It maintains an awareness of the tactical communications picture of all emergency operations in the MOA.

The Communications Chief functions as a part of the Logistics Section.

EOC primary responsibilities and roles in an emergency are as follows:

- Coordinate with California Office of Emergency Services (CalOES) and regional partners
- Maintain Mutual Aid agreements with state and regional agencies
- Maintain Memorandums of Understanding with MOA agencies, and private and public partners, to coordinate deployment of communication resources.
- Maintain primary and alternate contact list with local jurisdictions, other state agencies, local telephone and internet service providers, and communications equipment vendors that provide services to the MOA.
- To maintain 24/7 deployment status of Mobile EOC and the communications van.
- To liaison with responding federal and state agencies; i.e. USFS, BLM, etc.

#### **4.1.3 Local Government Departments**

In an emergency, certain city and county departments respond more frequently: Public Health, Social Services, Public Works, and RMOAs. In addition to duties specified in the 2015 Modoc EOP, it is the responsibility of these departments:

- to coordinate acquisition of communications equipment and systems with the Sheriff's Office and Office of Emergency Services;
- to participate in training and exercises to ensure responsive and reliable communications support;
- to plan for alternate communications in the event that the primary communications protocol is non-functioning

#### **4.2 Operational Area Jurisdictions**

Within the Modoc MOA are two hospital districts and thirteen fire districts. All depend on Modoc Office of Emergency Services and the Sheriff's Office for communications. This includes daily operations, acquisition and coordination of equipment, and training and exercises. Their responsibilities include:

- to coordinate acquisition of communications equipment and systems with the Sheriff's Office and Office of Emergency Services;
- to participate in training and exercises to ensure responsive and reliable communications support;
- to plan for alternate communications in the event that the primary communications protocol is non-functioning

#### **4.3 Local Non-governmental Agencies**

#### **4.3.1 Amateur Radio Emergency Services (ARES)**

ARES is a secondary resource that provides support for alternate emergency radio communications. The Office of Emergency Services has an ongoing Memorandum of Understanding with them for response deployment. ARES maintains a contact list of licensed responders who will work under the direction of the EOC. They also will participate in training and exercises.

### **5. Administration**

Under California Standardized Emergency Management System (SEMS), special districts are considered local jurisdictions. As such, they are included in the emergency planning efforts throughout the Modoc County Operational Area (MOA). The MOA Emergency Organization functions within the SEMS protocol. In addition, the MOA functions within the Federal National Incident Management System (NIMS) and follows the Incident Command System (ICS). This allows various local, State and Federal governments as well as private-sector organizations to work together. Mutual aid, including personnel, supplies, and equipment, is provided in accordance with the California Master Mutual Aid Agreement as well as MOA Memorandums of Understanding.

Communications does not function separately from other emergency operations. Functional duties are specified in the 2015 Modoc County Emergency Operations Plan.

**5.1 Planning:** Information collection and data analysis

**5.2 Logistics:** Coordination of resources

**5.3 Finance:** Tracking of expenses and utilizing reimbursement programs

### **6. Development and Maintenance**

All plans are dynamic. The Interoperable Communications Annex part of the 2015 Modoc County Emergency Operations Plan (EOP); as such, all sections of the EOP are applicable to this Annex. It has been approved by the Modoc County Disaster Council and the BMOArd of Supervisors. It is the intent of the Office of Emergency Services and partner agencies to exercise this plan and review it. No plan can be expected to address every potential problem or prescribe the correct action; therefore modifications as a result of exercising and utilization should be an integral part of an annual process.

## **7.0 Appendices**

### **7.1 Forms**

7.1.a ICS 205 Communications Plan