

# County of Kings

Communication & Warning Annex

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## **INTRODUCTION**

Essential to all emergency organizations is an effective communications capability to support emergency operations. The magnitude of a particular emergency situation will determine the degree to which communication systems are used. Communication systems are relied upon and used for direction and/or coordination of emergency operations, alerting and warning government and the public, and to provide advice and instructions to the public.

## **PURPOSE**

This Annex describes the processes and methods for providing reliable and effective communications among organizations participating in an emergency operation and outlines the types of communication systems and facilities by which the emergency missions and functions of the operations plan will be carried out in an emergency.

## **COMMUNICATION SYSTEMS**

Communications used on a daily basis by most agencies, particularly public safety agencies, are the same as will be used in widespread disasters within the unincorporated areas of the County as well for intra-jurisdictional communications. These agencies will also be expected, at least initially, to operate from their day-to-day offices and headquarters. Departments requiring communications personnel augmentation should request assistance through their Logistics Section at the County Emergency Operations Center (EOC). Emergency procurement of communication-related equipment and/or supplies is also handled through the Logistics Section.

The radio system in the Emergency Operations Center is primarily used for monitoring public safety activity in the field; however, typical communications for the Emergency Operations Center is either through the use of normal phone system or via cell phone. The County maintains an Operational Area Tactical Interoperable Communications Plan. At the time of the development of this Communications and Warning Annex, the Tactical Interoperable Communications Plan was in draft form and in the process of being finalized by the working group in Kings County.

## **COMMUNICATION SYSTEMS VULNERABILITIES**

Telecommunication systems are composed of many subsystems, each may be interdependent or interconnected. A radio network, for example, may use a combination of telephone lines, microwave circuits, satellite interfaces, underground and overhead cables, and secondary radio paths. The failure of any one link in this chain can effectively disable or severely limit a large portion of the system.

Communication systems may be overloaded or even rendered inoperable in an emergency. Telephone communications may be overloaded by calls within or into affected areas. The situation may be further complicated by physical damage to equipment, loss of electrical power and subsequent failure of some auxiliary sources. Loss of emergency power has been the primary cause of communication failures in past disasters. Poor installation practices and inadequate preventative maintenance of backup power sources can contribute to the high failure rate. Scarcity of primary fuels during an emergency or disaster situation for back-up systems (gasoline, natural gas, and diesel) may limit viability of surviving communication sites.

In situations arising from a radiological incident or detonation, high intensity, short duration electromagnetic pulse may cause damage or malfunctions to unprotected electrical and electronic systems. Electromagnetic pulse damage can occur instantaneously over very large areas. All

communications equipment is susceptible to damage or destruction by electromagnetic pulse, including broadcast stations, radios, televisions, car radios, and battery-operated portable radios.

### **Warning**

Warning is the process of alerting governmental forces and the general public to the threat of imminent extraordinary danger. Dependent upon the nature of the threat and the population group at risk, warning can originate at any level of government.

Success in saving lives and property is dependent upon timely dissemination of warning and emergency information to persons in threatened areas. Local government is responsible for warning the populace of the jurisdiction. Government officials accomplish this using warning devices located within the community or mounted on official vehicles. The warning devices are normally activated from a point staffed 24 hours a day.

There are various mechanical systems in place, as described below, whereby an alert or warning may originate or be disseminated. Following the description of the systems is an explanation of the local/operational area alert and warning processes through which these systems may be accessed.

### **KINGS COUNTY RADIO FREQUENCIES**

For a complete list of radio frequencies for the county and each city, refer to the Kings County Tactical Interoperable Communications Plan. At the time of the development of this Communications and Warning Annex, the Tactical Interoperable Communications Plan was in draft form and in the process of being finalized by the working group in Kings County.

### **FEDERAL ALERT AND WARNING SYSTEMS**

#### **Integrated Public Alert and Warning System**

The Integrated Public Alert and Warning System is a modernization and integration of the nation's alert and warning infrastructure and will save time when time matters most, protecting life and property.

Federal, State, territorial, tribal and local alerting authorities can use the Integrated Public Alert and Warning System to integrate local systems that use Common Alerting Protocol standards with the Integrated Public Alert and Warning System infrastructure. Integrated Public Alert and Warning System provides public safety officials with an effective way to alert and warn the public about serious emergencies using the Emergency Alert System, Wireless Emergency Alerts, the National Oceanic and Atmospheric Administration Weather Radio, and other public alerting systems from a single interface.

#### **Emergency Alert System**

The Emergency Alert System (EAS) is a network of public broadcast stations and interconnecting facilities that have been authorized by the Federal Communications Commission (FCC) to operate in a controlled manner during a state of public peril or disaster, or other large-scale emergency. The system's main purpose is to provide the President and Federal Government Officials the means by which to transmit emergency communications to the public. It may also be used for local, state and other national programming for public information on situations posing a threat to life and/or property.

### **National Warning System**

This system is a nationwide 2-way voice wire-line communications system connecting subscribing emergency management organizations designed primarily to warn of a nationwide attack. It may also be used for coordination and communications for major peacetime emergencies.

## **STATE ALERT AND WARNING SYSTEMS**

### **California Warning System**

The California Alert and Warning System is the State's portion of the National Alert and Warning System that extends to communication and dispatch centers throughout the State. Cal OES headquarters ties into the federal system through the Cal OES Warning Center in Sacramento. Circuits then extend to county warning points. The California Highway Patrol (CHP) headquarters in Sacramento is the State's alternate warning point. Both state and federal circuits are monitored 24 hours a day at the Warning Center, the alternate point at CHP headquarters, and each of the local warning points throughout the counties. Counties not on this system will receive warning through other means (normally over the California Law Enforcement Telecommunications System.)

### **California Emergency Services Radio System**

The California Emergency Services Radio System serves as an emergency communications system for Cal OES and county emergency services organizations. The system assists in the dissemination of warning information and used to support disaster and emergency operations. The system may be used on a day-to-day basis for administrative emergency services business. Statewide communications are provided through a number of microwave interconnected mountain top relays. The system operates under appropriate Federal Communications Commission rules and regulations and is administered by Cal OES.

### **California Law Enforcement Radio System (Inter-agency Radio)**

California Law Enforcement Radio System is a microwave interconnected radio repeater system with statewide coverage. It may also have been referred to locally as Inter-agency Radio. This system was designed for use by law enforcement agencies for point-to-point communications and to provide a backup warning system to all counties in the State. Cal OES provides and maintains the statewide repeater system and microwave network for use by law enforcement agencies. System users are responsible for providing their own base station equipment and obtaining proper licensing from the FCC. Participation in using the California Law Enforcement Radio System is voluntary; therefore, many agencies no longer maintain the equipment. The Kings County Sheriff's Office participates in California Law Enforcement Radio System.

### **California Law Enforcement Telecommunications System**

California Law Enforcement Telecommunications System is a high-speed message switching system which became operational in 1970. California Law Enforcement Telecommunications System provides law enforcement and criminal justice agencies access to various data bases and provides the ability to transmit and receive point-to-point administrative messages to other agencies within California, as well as via the National Law Enforcement Telecommunications System, to other states and Canada. Broadcast messages can be transmitted intrastate to participating agencies in the Group Bulletin Network and to regions nationwide via National Law Enforcement Telecommunications System. The State provides the computer hardware, switching center personnel, administrative personnel, and the circuitry to one point in each county. The local agencies provide the circuitry and equipment which link them to their county termination point. A number of agencies have message switching computer systems and computer aided dispatch systems which directly connect to California Law Enforcement Telecommunications System. The

California Law Enforcement Telecommunications System terminal is housed at the Kings County Sheriff's Office.

### **Operational Area Satellite Information System**

The Operational Area Satellite Information System (OASIS) project, funded under the Earthquake Hazards Reduction Act of 1986, was established to create the most robust communications system possible using leased transponder space from commercial satellite operators. The result is the establishment of a system which allows virtually un-interruptible communication between state, regional and operational area level Emergency Operations Centers.

Operational Area Satellite Information System (OASIS) is a system that consists of a communications satellite, multiple remote sites and two hubs. The satellite is in a stationary or geo-synchronous orbit above the earth's equator. A high frequency radio system and a satellite communications network were constructed to link all 58 counties with Cal OES and other state agencies for communicating during a disaster as well as day-to-day communications. The system, which uses technology similar to cellular telephones, has more than 800 phone lines statewide.

The equipment necessary for the remote sites includes a six-foot diameter dish antenna using Very Small Aperture Terminal (VSAT) technology. These sites were originally set up by Cal OES and are capable of conducting eight simultaneous voice conversations and one data channel at DSL speed.

The final components are the hubs. The hubs are large external dish antennas and a network control station which is managed by Cal OES personnel. The hubs provide access control for the system and can control all 58 Operational Areas and several transportable stations. Cal OES personnel will use the hubs to define the network, detect trouble and serve as an emergency alert network for other Cal OES personnel.

### **California Health Alert Network**

The California Health Alert Network (CAHAN) is the State of California's web-based information and communications system available on a 24/7/365 basis for distribution of health alerts, dissemination of prevention guidelines, coordination of disease investigation efforts, preparedness planning, and other initiatives that strengthen state and local preparedness. California Health Alert Network participants have the ability to receive alerts and notifications via alphanumeric pager, e-mail, fax, and phone (cellular and landline).

In Kings County, California Health Alert Network alerts are received by Public Health Officials, the Emergency Services Coordinator, and local hospitals and clinics.

## **LOCAL/OPERATIONAL AREA ALERT AND WARNING SYSTEMS**

### **Kings County Emergency Notification System**

The County Sheriff and County Fire Department have the primary responsibility in alerting and warning the public, with assistance from the Public Information Officer (PIO) and Emergency Operation Center (EOC), as deemed necessary. Alerting and warning the public may be accomplished through the Kings County Emergency Notification System (Everbridge); Emergency Alert System (EAS), special broadcasts, or through use of mounted or stationary public address systems.

Emergencies which may warrant either immediate or delayed response by broadcast media under EAS are emergencies such as heavy rains and flooding, widespread power failures, severe industrial

accidents, hazardous material accidents, agricultural and transportation incidents, serious fires and earthquakes. The context of any emergency broadcast transmitted on EAS should be of concern to a significant segment of the population.

Local broadcast stations have the right to edit or use any or all of an EAS broadcast. Any jurisdiction within the County may make separate programming arrangements with any broadcast station independent of the Emergency Alert System.

### **Emergency Alert List**

The Emergency Alert List is a phone list that is to be activated and implemented when an emergency or disaster affects Kings County and poses a major threat to life, property, and/or the environment. The list will only be activated when directed by Kings County on the order of the Director of Emergency Services (as designated by Chapter 6 – Emergency Services of the County of Kings Government Code), the Emergency Services Coordinator or designee, or the Incident Commander when a disaster occurs or threatens to occur within County limits.

Once activation is requested and properly authorized, the Kings County Emergency Operations Center personnel will implement the Emergency Alert List. Notifications and alerts begin with the Director of Emergency Services. If the Director cannot be reached, his/her successor(s) will be contacted until someone is reached to assume the Director of Emergency Services' role.

A complete status of the incident or disaster such as identifying damage sustained, current response actions, resource status, etc., will be provided to the Director by the Sheriff's Dispatch Center. Based on the information provided by the dispatcher, the Director of Emergency Services will determine what parts of the Emergency Alert List will be implemented, including what sections of the Kings County Emergency Operations Center (EOC) will be alerted and requested to respond. The dispatcher will confirm whether or not the Director of Emergency Services will personally contact and inform the County's Board of Supervisors of the situation within the County. The Director may request that the dispatcher notify the County Board of Supervisors.

The Emergency Alert Lists maintained and kept current by the Kings County Office of Emergency Management. The County Office of Emergency Management must also ensure that Emergency Operations Center, the Emergency Services Director, and the EOC personnel have current copies of the Emergency Alert List.

### **Law Enforcement and Fire Service Network**

This network operates on several channels and both UHF and VHF frequencies. Channels are used for the countywide dispatch and control law enforcement, fire, and public works service units based on area. These channels will be used by the Law Enforcement, Fire and Public Works Units in the EOC to keep informed on developments. Main dispatch will remain with Kings County Sheriff's Office. Should the 9-1-1 system go offline, the notification duties get transferred to other agencies within the County. The EOC will have radio contact to a dispatch operator.

#### **The Kings County Dispatch Center**

The dispatch center provides a centralized dispatching service for law enforcement, fire and public works. Operational responsibilities incorporate a wide variety of public safety activities, and direct interaction with many local government agencies. Event coordination involves the use of complex phone, radio and computer aided dispatch systems.

**Public Health and Social Services Network**

This network is operated by the Kings County Department of Public Health which utilizes VHF to communicate with hospitals and clinics. The Public Health Department, hospitals and clinics in Kings County rely on the use of landline phone, cellular phones and deployment of the Amateur Radio Emergency Services (ARES) network for shelter communications and are notified through the CAHAN system as well as other communication systems used by the County.

**OTHER WARNING DEVICES AND SYSTEMS**

**Kings County Website**

The Kings County website, <http://www.countyofkings.com> is used as a resource for information dissemination to the citizenry and general public.

**Local Radio and Television Stations**

Kings County has dedicated radio and television station channels to inform the citizenry of potential incidents. Those channels are as follows:

TV Station	Channel Number	Network	Call Sign	Broadcast Location	DMA Coverage	Station Power
KERO	23	ABC	KERO	Bakersfield, CA	Bakersfield	Digital Full-Power - 4.6 kW
KSEE	24	NBC	KSEE	Fresno, CA	Fresno-Visalia	Digital Full-Power - 1580 kw
KBAK	29	CBS	KBAK	Bakersfield, CA	Bakersfield	Digital Full-Power - 110 kW
ABC 30	30	ABC	KFSN	Fresno, CA	Fresno-Visalia	Digital Full-Power - 3720 kw
MY 45	45		KUVI	Bakersfield, CA	Bakersfield	Digital Full-Power - 620 kW
KGPE	47	CBS	KGPE	Fresno, CA	Fresno-Visalia	Digital Full-Power - 2630 kw

**Local Radio Stations**

- KMJ 580 AM (Fresno)
- KRZR 1400 AM (Visalia)
- KTIP 1450AM (Porterville)

Other warning systems utilized by the Kings County include mobile emergency vehicle sirens and loudspeakers, helicopters using PA systems, door-to-door notification by neighborhood groups and associations, and law enforcement volunteers, explorers and reserve deputies/officers.

**Communications Management**

In the event that there is a breakdown or a shortfall in communication channels, the Kings County Office of Emergency Management has access to portable radios that are programmed with federal interoperability frequencies.

**ANNEX MAINTENANCE**

The Kings County Office of Emergency Management will coordinate with the Sheriff's Office and Fire Department on any updates and revisions of this Communications and Warning Annex.

Those agencies and organizations listed as having anticipated roles and responsibilities under this Annex shall inform the Director of Emergency Services when they are aware that changes need to be made.