Oakland
Alameda County
Contra Costa County
Urban Area

Tactical Interoperable Communications Plan
(TICP)

April 25, 2006

Executive Overview

This document establishes a Tactical Interoperable Communications (TIC) Plan for the Oakland Urban Area Security Initiative (UASI). The TIC Plan is intended to document what interoperable communications resources are available within the urban area, who controls each resource, and what rules of use or operational procedures exist for the activation and deactivation of each resource.

Creation of a TIC Plan was a requirement of the Office for Domestic Preparedness 2005 UASI grant program.

DRAFT

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GLOSSARY AND DEFINITIONS

ALCO	Alameda County
(ANSI)/TIA/EIAA-102 Phase 1	American National Standards Institute (ANSI)/TIA/EIAA-102 Phase 1 (Project 25) suite of standards. This recommendation is intended for government-owned/leased land mobile public safety radio equipment, and its purpose is to make sure that such equipment or systems are capable of interoperating with other public safety land mobile equipment or systems.
"Direct" communications	Short-range, line-of-sight communications directly from one radio to another without benefit of a repeater to extend the range of the transmitted communication.
"Move-up" algorithm or capability	Fire Service plans developed to ensure that the nearest unit will respond to a call-for-service.
"Talk-around" communications	Short-range (a few miles or less), communications directly from one radio to another without benefit of a repeater to extend the range of the transmitted communication. Generally limited to a few miles of effective coverage.
800 MHz	FCC channels allocated for public safety use in the 801-860 MHz range.
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
Cluster	A cluster is a term used when more than one repeater site collectively covers a large geographic area which can be more than one county/city. It may cover all or encompass portions of adjoining counties/cities. This is why enabling and disabling repeater functionality is critical to a successful mutual aid operation.
CoCo County	Contra Costa County
COMC	Communications Coordinator
COML	Communications Unit Leader
DHS	U.S. Department of Homeland Security
EBRCS	East Bay Regional Communication System
EDACS	Enhanced Digital Access Communications System marketed by M/A-Com
Hailing Channel	M/A channel used by out-of-area public safety officers to contact local public safety dispatch centers.
IAP	Incident Action Plan
IC	Incident Commander

I-CALL, I-TAC	M/A frequency pairs that are reused across the Nation in the 800 MHz band. I-CALL is commonly used as a "hailing" channel by out-of-area public safety members trying to contact local responders. I-TAC is an "assigned" mutual aid channel.
ICC	Incident Communications Center
ICPG	Interoperable Communications Project Group
ICS	Incident Command System
ICTAP	Interoperable Communications Technical Assistance Program (ICTAP), a technical assistance program designed to enhance interoperable communications between local, state, and federal emergency responders and public safety officials.
Interoperable CALL Channel (NPSPAC)	A frequency pair is assigned to Interoperable CALL Channel (8CAL90D) and is reused across the state as well as the nation. It is used to hail the responsible Network Control Center (NCC) for the area. 8CAL90D operates strictly in the repeater Disabled mode and is sometimes referred to as the "Hailing" channel. Regardless of what NCC(s) may exist in an area, at least one should hear hails on the 8CAL90D channel with the primary or back-up NCC responding.
Interoperable TAC Channel (NPSPAC)	A frequency pair is assigned to an interoperable TAC 1 Channel (8TAC91D) that is reused across the state as well as the nation. It is used as a tactical or operational channel when adjoining counties/cities need to share communications. Although 8TAC91D normally operates in the repeater Disabled mode, it can be put into Enabled mode for wide-area mobile communications. 8TAC91D meets needs across multiple local jurisdictions.
Interoperable/Mutual Aid TAC Channels 2, 3 and 4	Interoperable/Mutual Aid TAC Channels 2, 3 and 4 – Like 8TAC91D, a unique frequency pair is assigned to each Interoperable/Mutual Aid TAC 2, 3, and 4 channels that is reused across the state as well as the nation. It is used as a tactical or operational channel when adjoining counties/cities need to share communications. Although Interoperable/Mutual Aid TAC 2, 3, and 4 channels normally operate in the repeater Disabled mode, they can be put into Enabled mode for wide-area mobile communications. These channels are tailored to meet communications needs within local jurisdictions whereas 8TAC91D meets needs across multiple local jurisdictions.
LNCC	Local Network Control Center The local Network Control Center is Alameda County Sheriff's Office dispatch that would have operational control of local mutual aid channels (8TAC92D, 8TAC93D, 8TAC94D – formerly I-TAC2, 3, and/or 4) to complement the State's 8CAL90D and 8TAC91D.
M/A and MA	Mutual Aid. When used in reference to State Mutual Aid Channels, also known as Interoperability Channels.
MHz	Megahertz
MOU	Memorandum of Understanding

NCC	Network Control Centers are responsible for constantly monitoring 8CAL90D and I-TAC M/A channels within a region.
NGO	Non-government organizations
NIMS	National Incident Management System
NPSPAC	National Public Safety Planning Advisory Committee for public safety channels in the 806-824 MHz band. These channels are currently impacted by interference from some cellular providers, primarily Nextel. The FCC is in the process of rebanding (reallocating) frequencies in this band to eliminate the interference.
NRP	The National Response Plan is an all-discipline, all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. It provides the structure and mechanisms for the coordination of federal support to state, local, and tribal incident managers and for exercising direct federal authorities and responsibilities.
ODP	DHS Office for Domestic Preparedness
POC	Point-of-Contact
Radio Cache Manager	Person responsible for distribution, care and maintenance of spare radios retained for the purpose of enabling communications with assisting first responders from other jurisdictions
Repeater	High powered radio generally mounted on a tower to amplify and extend the geographic coverage area of portable and mobile radios.
Repeater Disabled	Mode which prohibits portable or mobile radios from using repeaters, thus limiting geographic coverage to line-of-sight to the other radio, generally no more than a few miles.
Repeater Enabled	Mode which enables the use of a repeater radio to amplify and extend the geographic coverage area of portable and mobile radios.
SOP	Standard Operating Procedures
TAC & STACK	Multiple co-located cross-band repeater clusters
TICK	Tactical Interoperable Communications Kit – Alameda County
TICP - TIC Plan	Tactical Interoperable Communications Plan
UA	Urban Area
UASI	Urban Area Security Initiative – The intent of the Urban Area Security Initiative program is to create a sustainable national model program to enhance security and overall preparedness to prevent, respond to, and recover from acts of terrorism.

UAWG	Urban Area Working Group
UHF	Ultra High Frequency
VHF	Very High Frequency

1 Urban Area Information

1.1 Overview

OAKLAND/ALAMEDA COUNTY/CONTRA COSTA COUNTY URBAN AREA-
City of Oakland: The City of Oakland, located on the east side of the San Francisco Bay, is a major West coast port and manufacturing center. It is linked to the city of San Francisco by the San Francisco-Oakland Bay Bridge. Oakland has a population of approximately 410,000, is the seventh largest city in California and the largest city in Alameda County, with 30% of the total population of the county. It is also the home of two large sports and entertainment complexes, the Oakland-Alameda County Arena and McAfee Coliseum. These facilities house a professional football, baseball and basketball team, the only city in California to serve as home to three sports teams. The Oakland International Airport serves nearly 14 million passengers annually. The Port of Oakland is one of the five largest container ports in North America and one of the top 20 worldwide, controlling over 19 miles of shoreline.

The Bay Area Rapid Transit District (BART) is a regional rapid transit system. It operates electric-powered trains in 4 counties within the metropolitan San Francisco Bay area. The system's 44 passenger stations are distributed along 105 miles of track, and are the access points for the 340,000 people who use BART daily. Sections of BART track run at surface grade level, on aerial structures, and in underground tunnels. Of special note are two long tunnels, one spanning underneath the San Francisco Bay between Oakland and San Francisco, and one crossing under the east bay hills between Oakland and Orinda.

Alameda County: Alameda County is sixth in size among all California counties; at 738 square miles. The County has a population of approximately 1.5 million people living in 14 incorporated cities; and 140,000 citizens living in six main unincorporated communities. The County's population is diverse, both economically and ethnically. Personal incomes vary widely throughout communities.

Contra Costa County: Lying to the north and east of Alameda County, Contra Costa County, with a current estimated population of 1,017,787, is the ninth most populous county in California. The County has one of the fastest growing work forces among Bay Area counties, with its employment base being primarily driven by the need to provide services to an increasing local population. Due to the presence of relatively high-wage skilled jobs and relatively wealthy residents, the County achieves high rankings among all California counties on a variety of income measurements.

This TIC Plan is intended to apply to the two counties of the Oakland/Alameda County/Contra Costa County Urban Area as defined above. Specifically, the plan is intended to be used by the first responder disciplines that would respond to the scene of

an emergency, as well as other disciplines that would need to be coordinated with during the response. These include:

- Law Enforcement
- Fire Service
- Emergency Medical Services
- HAZMAT
- Public Safety Communications
- Emergency Management
- Public Works
- Public Health
- Government Administration
- Health Care

1.2 Included Agencies

The agencies represented in the TIC Plan are included in Appendix A.

1.3 TIC Plan Point of Contact

The primary point of contact (POC) for questions regarding the TIC Plan is:

Name: Susan F. Newton
Title: Homeland Security Program Coordinator
Address: 1605 Martin Luther King Jr. Way, Oakland, CA 94612
Phone: (O) 510.238.2985
Mail: snewton@oaklandnet.com

2 Governance

2.1 Overview

This TIC Plan has been developed under the authority of the Interoperable Communications Project Group (ICPG) which is comprised of three working committees:

- Governance
- Operation
- Technical

The three working committees shall provide all governance and coordination for the development and implementation of this TIC Plan.

2.2 Membership

Current Chairs:
Governance-
Bill McCammon, Chief, Alameda County Fire Dept., 510-618-3490, bill.mccammon@acgov.org
Robert Maginnis, Asst. Sheriff, Alameda County Sheriff's Dept., 510-208-9966, rmaginnis@acgov.org

Operations-
Roderick Golphin, Lt., Oakland Police Dept, 510-777-8911, RGolphin@oaklandnet.com
Rocky Medeiros, Capt., Alameda County Sheriff's Dept., 925-803-7800, rmedeiros@acgov.org

Technical-
Randy Hagar, Deputy Director, Alameda County-GSA, 510-208-9789, randall.hagar@acgov.org

Bob Glaze, Chief Technology Officer, City of Oakland, (510) 238-2930, RGlaze@oaklandnet.com

2.3 Responsibilities of the Governing Body

The governing body will hold the following responsibilities:

- Maintaining and updating this TIC Plan
- Adopting final solutions and directing implementation
- Establishing training recommendations in support of this TIC Plan

- Executing Memoranda of Understanding and Sharing Agreements for interoperable communications

2.4 Meeting Schedule

The ICPG will have regular meetings.

2.5 Agency Responsibilities and Rights

Agencies will retain the following rights and responsibilities:

- Agencies are responsible for agreeing to and complying with Memoranda of Understanding/Agreements developed by the governing body.
- Agencies agreeing to this plan have the authority to request use of systems in accordance with Standard Operating Procedures (SOPs). Dispatch agencies and emergency communications centers of participating agencies have the authorization to request use of the systems.
- Where applicable, agencies will be responsible for maintaining, testing and exercising connectivity to interoperable communications systems.
- Agencies retain the right to decide when and where to participate in interoperable communications, i.e., agencies will retain the right to accept or decline a patch to a gateway system to provide interoperable communications during an incident.

2.6 Regional Authority for Coordination and Assignment of Interoperability Assets

The region, by written agreement, is authorized to appoint three COMCs who will be given the authority to coordinate and assign interoperability assets. The role and authority of the COMCs will be formalized in the Memoranda of Understanding and Sharing Agreements for interoperable communications executed by the Governing Body and agreed to by participating agencies. A central authority for the coordination of these assets better ensures the most appropriate resources can be assigned for a particular incident. Additionally, a central authority helps prioritize and coordinate resources when large scale incidents or multiple emergencies have occurred. The Regional Interoperability Coordination in the Oakland/Alameda County/Contra Costa County Urban Area will be shared by the following organizations:

Agencies within City of Oakland will contact the following regional interoperability coordinator, also known as a Communications Coordinator (COMC):

Bob Glaze or designee
Chief Technology Officer
(510) 238-4709
24 hour phone (510) 238-4036 (Oakland Fire Dispatch)

RGlaze@oaklandnet.com

Agencies within Alameda County will contact the following COMC:

Randy Hagar or designee
GSA Communications Department
(510) 208-9789
24 hour phone (510) 351-2020
randall.hagar@acgov.org

Agencies within Contra Costa County will contact the following COMCs:

Lisa Hoffman
Communication Center Director, Contra Costa County Sheriff's Office
(925) 313-2454
24 hour phone (925) 646-2441
lhoff@so.cccounty.us

Brent Finster
Telecommunications Manager, Contra Costa County Fire
(925) 941-3340
24 hour phone (925) 941-3330
bfinster@cccfpd.org

The COMCs will keep each other appraised of what interoperability assets are in use at any given time.

When the same resources are requested for two or more incidents, the COMCs will prioritize resource assignment based on the priority levels below:

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

If there are multiple incidents requiring interoperable resources, priority shall be determined by the State OES in the State Mutual Aid Plan.

3 Interoperability Equipment

This section describes all interoperable equipment in the urban area.

3.1 Swap Radio

"Swapping radios" refers to maintaining a cache of standby radios that can be deployed to support regional incidents. These radios may be from a regional cache, or from a participating agency. This allows all responders to use a common, compatible set of radios during an incident. These radios have been deployed on a long term basis to allow interoperability between agencies. Specific caches within the region are listed in Appendix B.

3.2 Shared Channels

"Shared channels" refer to common frequencies or channels (such as those of a participating agency) that have been established and are programmed into radios to provide interoperable communications among agencies. Specific shared interoperable communications channels available within the region are listed in Appendix C.

3.3 Gateway

"Gateway" systems interconnect channels of different systems (whether on different bands or modes). These gateways allow first responders to interconnect their existing radios and channels with the channels of users outside of their agencies. The City of Oakland is currently the only agency with a fixed gateway and a mobile gateway. Additional gateway information can be found in Appendix D.

3.4 Shared System

"Shared systems" refers to the use of a single radio system infrastructure to provide service to most Public Safety agencies within a region. Details on each system are provided in Appendix E.

3.5 Rules of Use

The following rules apply to the use of radio caches, shared channels, gateways and shared systems.

Examples of proper use of the interoperable channels:

- As working channels for multiple fire departments fighting a fire together

- For coordination during a police chase through multiple jurisdictions where the agencies have no other communications link with each other
- For Communications during extended joint operations between multiple police agencies such as drug operations, riots, etc.
- For coordination during recovery operations after a disaster such as a hurricane when local, state, and federal officials require a common communications link

Examples of improper use of the interoperable channels:

- To support the administrative functions of a fire department which has a mutual aid agreement with an adjacent fire department to provide "move up" capability when a fire unit leaves its own coverage area
- To provide an extra working channel for a non-urgent, non-critical event.
- To provide a surveillance channel for use between members of the same public safety agency

Other rules of use:

- Application and use of the National Incident Management System by any regional interoperability resource.
- The designated incident commander may limit the interoperable channel to command level staff during emergency events with multiple agencies,
- Connectivity between agencies shall only be requested for working emergency events as defined by ICPG.
- Agencies will identify themselves by agency name and designated call sign/radio designator.
- The person's identifier being called is followed by the identifier of the person who is calling.
- All messages should be in plain language. The use of 9, 10, and 11-Codes and specific agency acronyms is discouraged.
- Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as "help", "assistance", "repeat" and "back-up" may have different operational meanings to different agencies. The word "Help" should not be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request.
- Communications during an incident should be compliant with NIMS by using the NIMS identifier, (i.e., operations, logistics, command, information, liaison) with the agency name and unit number.
- The requesting agency's dispatcher should monitor the radio traffic between units and advise the control point when the patch can be deactivated.
- All encrypted radio users will be required to work in the "clear" mode.

Note: Interconnecting encrypted and non-encrypted channels on a gateway can compromise operations or allow sensitive information to be intercepted because it is difficult to ensure all encrypted channel users are aware of when there are interconnections to non-encrypted channels. An encrypted channel user can mistakenly believe that their communication is secure, when in fact the communication is being broadcast in the clear over a non-encrypted channel through a gateway connection. For this reason, the default policy will be that encrypted channels will not be used where non-encrypted channels are being interconnected with a gateway.

3.6 Problem Identification and Resolution

The following methods of problem identification and resolution apply to radio caches, shared channels, gateways and shared systems.

3.6.1 Radio Cache

- The COMC will be responsible for ensuring effective resolution to problems that exist with interoperability resources.
- During deployment, problems with individual radios will be reported to the technician who was dispatched to the scene.

3.6.2 Shared Channels – NPSPAC and All Others

- The dispatch center having jurisdiction over the location of the incident reports any problems experienced to the COMC.
- The COMC will be responsible for ensuring effective resolution to problems that exist with interoperability resources.

3.6.3 Gateways

- The gateway manager immediately reports any problems with activation or deployment of the interconnects to the Incident Commander and the COMC. Agencies using gateways may also report any problems experienced.
- The COMC will be responsible for ensuring effective resolution to problems that exist with interoperability resources.

3.6.4 Shared Systems

- The dispatch center having jurisdiction over the location of the incident reports any problems experienced to the COMCs.

The COMCs will be responsible for ensuring effective resolution to problems that exist with interoperability resources.

4 Policies and Procedures for Interoperable Equipment

4.1 Swap Radios

Frequencies for VHF, UHF, and 800 MHz radios can be found in Appendix B.

4.1.1 Cache Provider Responsibilities

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

- Be supported by alkaline batteries and battery pack "clamshells". If clamshells are unavailable for the specific model radio then rechargeable battery packs should be fully charged and maintained, ready for deployment at all times
- Include extra charged batteries and chargers for extended deployments
- Available personnel to transport the radios to the incident scene
- Available technicians for on-scene support during the deployment

4.1.2 Interoperable Communications Request

- During the incipient stages of an escalating incident, a Communications Unit Leader (COML) will be assigned. The COML, in consultation with the Incident Commander, will determine when a situation requires the use of a regional interoperability resource and will notify the dispatch center.
- Once requested, the dispatch center having jurisdiction over the location and type of the incident follows internal agency procedures to contact the COMC and relays pertinent information regarding the event.
- The following information is provided by the requesting agency at the time of an activation request:
    - User's agency
    - On-scene agencies requiring interoperability
    - Reason for request/type of event, i.e. emergency, etc.
    - Equipment required
    - Expected duration of event
    - Location required/access information
    - User/requestor and/or servicing dispatch contact phone number
- In the event that the agency activates its own radio cache, the COMC is notified and provided the above information.
- The COMC determines what regional interoperability resources are available for use and identifies a specific resource. The COMC activates the appropriate resource. For

example, if a radio cache is activated, the COMC contacts the radio cache manager to deploy the radio cache.
- The COMC coordinates the deployment by providing the contact information for the radio cache to the Incident Commander or their designee.

4.1.3 Radio Cache 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.
- The radio cache will be sent to the incident scene along with a knowledgeable technician who will be responsible for supporting the radios, including fully charged spare batteries.
- Each radio in the radio cache will have a unique identification number for inventory tracking.
- The technician will be responsible for keeping a list for the incident of each user to whom a radio has been distributed, the agency of the user and the identification number of the radio(s) provided to that individual, and frequency/channel of use.
- Each user and/or agency that has received a radio from the radio cache will be responsible for the return of that radio to the cache at the end of the incident.

4.1.4 Radio Cache Deactivation

- The Incident Commander will determine when the regional interoperability asset is no longer required.
- The Incident Commander or Logistics Section Chief will be responsible for coordinating the return of cache radios to the radio cache technician on-scene.
- At the end of the incident, the radio cache manager will be responsible for inventorying all radios returned to the cache. Before leaving the incident scene, the technician will determine if any radios have not been returned 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. If the missing radios cannot be recovered at the incident scene, the Logistics Section Chief will provide this information to the radio cache manager for resolution.

4.2 Shared Channels: NPSPAC Interoperability Channels

The procedures in section 4.2 apply to the NPSPAC Interoperability channels as shown in Appendix C. ***NOTE****: New 800 MHz names listed in Appendix C were adopted by the California SIEC in March 2006. Agencies will be required to conform as part of the Master Mutual Aid agreement to use these channels. Vendors are being alerted to this requirement by the 800 MHz Transition Administrator to ensure that radios are properly programmed as part of rebanding.*

ALAMEDA COUNTY: Alameda County has procured and installed mutual aid repeaters that operate on the 800 MHz. State Interoperability frequencies. The repeaters offer RF coverage to users from nearly any location within Alameda County, including and especially the three largest cities, Oakland, Fremont, and Hayward. The frequencies programmed are consistent with the State's Interoperability plan as adopted by the California Statewide Interoperability Executive Committee (CALSIEC) and may be in use by other agencies throughout the San Francisco Bay area. Therefore they are only temporarily activated (lit up) on an as-needed basis.

Any public safety or public service agency may request the use of these resources by contacting the Alameda County Sheriff's Dispatch via landline or radio, depending on the requesting agencies' capabilities and location. ALCO Dispatch will activate the repeaters on the requested channels and will also notify the Alameda County OES so that their use can be recorded as per the NIMS guidelines. Deactivation is also initiated by the agency that first requested the use of the repeaters following the same process it did to activate them.

An alternate means of activation or deactivation is that the Sheriff's Dispatch may contact the Alameda County General Services Agency, Communications Department on call technician(s) for assistance, particularly if one or more repeaters have already been activated. This is done in an attempt to minimize RF interference and heterodyning.

These 800 MHz mutual aid repeaters are an effective interoperability resource for any users of the Alameda County trunked radio system, or the trunked systems of Oakland, the State (CalTrans), San Francisco, Sacramento County, Bay Area Rapid Transit (BART), and other trunked radio system users who may need it and are in or near Alameda County. They complement those that are in use on Mt Sutro in San Francisco as well as those that are planned for all high level radio sites throughout the Bay area, anticipated for installation in 2007.

CONTRA COSTA COUNTY: Contra Costa County has procured and installed mutual aid repeaters that operate on the 800 MHz. State Interoperability frequencies. The repeaters offer RF coverage to users from nearly any location within Contra Costa County. The frequencies programmed are consistent with the State's Interoperability plan as adopted by the California Statewide Interoperability Executive Committee (CALSIEC) and may be in use by other agencies throughout the San Francisco Bay and Sacramento/Central Valley areas. Therefore they are only temporarily activated (lit up) on an as-needed basis.

Any public safety or public service agency may request the use of these resources by contacting the Contra Costa County Sheriff's Dispatch via landline or radio, depending on the requesting agencies' capabilities and location. CCCSO Dispatch will activate the repeaters on the requested channels and notify the on-duty or on-call Contra Costa Operational Area Fire & Rescue Communications Coordinator. Deactivation is also

initiated by the agency that first requested the use of the repeaters following the same process it did to activate them.

4.2.1 Overview of NPSPAC Channel Use

- State 8CAL90D and 8TAC91D. The State of California provides an Interoperable CALL Channel and an Interoperable TAC1 Channel across the state to all eligible agencies that own and operate 800 MHz radio equipment. These channels may be used for mutual aid operations when there is a large-scale incident, when no other Interoperable TAC channel is available, or when an incident is moving across county/city jurisdictions.

- Local Interoperable/Mutual Aid TAC2, 3, and 4. Similar to the State 8CAL90D and 8TAC91D channels, county/city agencies provide Interoperable/ Mutual Aid TAC 2, 3, and 4 within their respective jurisdictions but not necessarily in every county/city agency throughout California.

The field unit notifies the NCC for assignment of an Interoperable/Mutual Aid TAC channel. Each NCC should know where the local Mutual Aid TAC repeaters are within their jurisdictional responsibility and what area(s) they cover. This will become most important if a second mutual aid incident arises. Coordination between dispatchers to select the right Interoperable/Mutual Aid TAC channel is vital to each specific incident. These Interoperable/Mutual Aid TAC channels usually cover smaller areas (i.e., a county/city area in comparison to State Interoperable Channels). There are not as many overlapping repeaters on these Interoperable/Mutual Aid TAC channels such as those of the State 8CAL90D and 8TAC91D channels. Each county/city that implemented Interoperable/Mutual Aid TAC 2, 3, and 4 has control of them. They are not controlled by the state. Each County/city dispatch center controls the enable and disable function in its console and has the responsibility to enable and disable them at the console level. The State RCC cannot assist with Interoperable/Mutual Aid TAC2, 3, or 4 repeaters.

All repeaters need to be in the disabled mode at all times. Accordingly any unit transmitting on the Interoperable Channels will be heard by the associated NCCs. This is due to the console design. It is when two or more field units need to talk to each other on a mutual aid channel that the dispatcher needs to put the repeater in the Enabled mode. Otherwise, the units will not hear each other and can only hear the dispatcher. An exception to repeater use will be when two or more field units are in close proximity of each other; this allows mutual aid direct (or talk-around) communications.

If a moving incident takes units into an area where coverage poses a threat and an agency helicopter equipped with an 800 MHz public safety radio is assisting in the incident, the ground unit and the helicopter can go onto direct (or talk-around) mode. The agency helicopter can, in turn, relay information between the ground units and the dispatcher on the repeater channel. The direct (or talk-around) mode should only be used on the Interoperable TAC channels.

4.2.2 NPSPAC Procedures

This section contains the step by step process for use of the NPSPAC Interoperable CALL Channel and Interoperable TAC Channels.

8CAL90D – Interoperable CALL Channel Procedures

- 8CAL90D shall be left in the repeater disabled mode.
- Any 800 MHz radio user may hail on 8CAL90D.
- It will be the responsibility of the primary Local Network Control Center (LNCC) to respond to the unit that is calling in the cluster.
- If the primary LNCC is unable to respond, the back-up NCC (usually a State RCC) will respond to the unit that is calling in the cluster. Other back-up NCCs may participate as determined on a case-by-case basis.
- 8CAL90D shall be monitored at all times, 24 hours a day, 7 days a week during the incident by the primary and backup LNCC.
- For an extended incident, the dispatcher is responsible for notifying the LNCC that the mutual aid channel is in use.

8TAC91D – Interoperable TAC Channel Procedures

- 8TAC91D should be in the repeater disabled mode.
- When a unit hails on 8CAL90D and it is determined that a large-scale (or multi-cluster) mutual aid incident is going to take place or no other Interoperable TAC channel is appropriate or available, the dispatcher will advise the units involved to select 8TAC91D.
- The LNCC may enable the Interoperable TAC repeater as required for unit-to-unit communications.
- When the incident is over or requires communications through another cluster, the LNCC will disable the repeater in conjunction with the adjoining LNCC enabling their repeater as necessary.
- The primary LNCC can request assistance from the State RCC to enable and disable the 8TAC91D.
- The LNCC shall coordinate in advance with the adjoining primary LNCC when the moving incident is anticipated to require communications on 8TAC91D in the adjoining cluster.
- The field unit notifies LNCC once the assigned TAC channel is no longer needed.
- The LNCC ensures the repeater is disabled and makes it available for the next assignment.
- Direct (or talk-around) communications on 8TAC91D may be used when two or more units are in close proximity of each other.

- For an extended incident, the dispatcher is responsible for notifying the LNCC that the mutual aid channel is in use.

State Assistance/Control Procedures

- Assistance/control from the State Regional Communications Center (RCC) may be requested under the following conditions.
    - The moving incident can no longer be operated or monitored by the originating agency and the LNCC cannot hand over the incident to the successive LNCC of the moving incident, or
    - The incident (moving or stationary) is such that it would benefit from assistance control of the RCC.
    - Sufficient lead-time and briefing for the RCC is provided.
- Given any of the above, the RCC will assume control of the interoperable channel as the lead dispatcher throughout the remaining duration of the incident.
- The RCC will enable and disable the mutual aid repeater as the moving incident moves in and out of the repeater areas (a.k.a., clusters).
- The RCC may invoke "supervisory takeover" as the lead dispatcher, which will inhibit transmitting and repeater enable/disable by the LNCC of each respective cluster.
- Control handed over to the RCC will carry over to any and all successive LNCC areas without the need to re-acquire control from successive LNCC areas.
- The RCC will relinquish control when mutually beneficial to the incident, the RCC, and primary LNCCs.

8TAC91D - 8TAC94D TAC Channel Procedures

- 8TAC91D - 8TAC94D should be in the repeater disabled mode.
- When a unit hails on 8CAL90D, the dispatcher will advise the units involved to select the appropriate TAC channel.
- The LNCC may enable the assigned TAC repeater as required for unit-to-unit communications.
- When the incident is over or requires communications through another cluster, the LNCC will disable the repeater in conjunction with the adjoining LNCC Enabling their repeater.
- The LNCC shall coordinate in advance with the successive primary LNCC when the moving incident is anticipated to require communications on a TAC channel in the adjoining cluster.
- LNCC controls the activity for the duration of the incident on the TAC channel assigned.

- The field unit notifies the LNCC once the assigned TAC channel is no longer needed.
- The LNCC ensures the repeater is disabled and makes it available for the next assignment.
- Direct (or talk-around) communications on 8TAC91D may be used when two or more units are in close proximity to each other.
- For an extended incident, the dispatcher is responsible for notifying the LNCC that the mutual aid channel is in use.

Dispatchers – **Disable** the repeaters when the incident is done.

When monitoring Interoperable Channels, if units are heard communicating and there is a question of authorization, the dispatcher should request unit identification. If unauthorized communications are taking place, adjoining LNCCs should be called to identify the users. Officer safety may be compromised if the channel(s) are inadvertently disabled or otherwise altered. If unauthorized traffic is being passed, the primary or back-up LNCC can disable the repeater to halt its use. Follow-up activity by the LNCC taking action should ensure future unauthorized use is mitigated.

4.3 Shared Channel: All Other Shared Channels

The procedures in this section apply to all other shared channels not addressed in section 4.2. See Appendix C for a list of other emergency and mutual aid frequencies.

4.3.1 Shared Channel Procedures

- If an individual responder needs to talk to an agency with which they do not otherwise have communications, the responder notifies dispatch that they need to operate on one of the interoperability channels. Dispatch or the responder can determine the appropriate channel.
- For an extended incident, the dispatcher is responsible for notifying the COMC that an interoperable or mutual aid channel is in use.
- When a responder is dispatched to an incident, each agency dispatcher is responsible for notifying responders what interoperable or mutual aid channels are being used for the incident.
- The Incident Commander determines when the interoperable or mutual aid channel(s) is (are) no longer required and notifies his/her dispatch center.
- The dispatch center having jurisdiction over the location of the incident notifies each responding agency that operations on the channel are ending.

4.4 Gateways

This document provides guidance on use of the radio communication gateways for the Oakland/Alameda County/Contra Costa County Urban Area to request interoperable communications between local, state, and federal agency commanders during emergency incidents.

4.4.1 Participating Agencies

FIXED GATEWAY: The City of Oakland is the only agency with a fixed gateway (ACU-1000) which has been installed at the City of Oakland Emergency Operations Center. The fixed ACU1000 augments the dispatch radio equipment, thus affording the ability to patch various radio channels that appear on the Oakland EDACS radio infrastructure. In the near future, Contra Costa County will be installing fixed gateways at two hilltop sites which will cover the 800 MHz. Band, UHF T-Band, UHF, VHF, and Low-band.

STORED GATEWAY: Alameda County and Contra Costa County maintain a supply of deployable audio matrix switches that are designed to provide a radio gateway that can be rapidly configured and deployed to an emergency response scene to link disparate or incompatible radio systems.

MOBILE GATEWAY: The City of Oakland operates an ACU1000 mobile audio matrix switch that is designed to provide a radio gateway. It can be configured and deployed to an emergency response scene to link disparate or incompatible radio systems with some limitations.

Alameda County has developed 5 separate Tactical Interoperable Communications Kits (TICKs) to facilitate the rapid deployment of transportable radio gateways anywhere in the SF Bay area. They are designed to patch conventional radio channels to one another from any of the 5 common bands used by public safety, as well as the GlobalStar satellite telephones. Each TICK currently contains 8 mobile radios operating on VHF, UHF, UHF T-band, 700/800MHz, and soon the VHF low band. The mobile radios include proprietary trunked radios from EDACS and Motorola's SmartNet II systems, commonly used in the SF Bay area. The TICKs can be transported and immediately deployed in their self-contained ruggedized cases via any vehicle or airlifted to a scene along with the Communications Unit Leader.

Contra Costa County also utilizes ACU-1000's installed in several Mobile Communications Centers. One has been installed in the San Ramon Fire District Mobile Communications Center (Comm Support 131) and is pre-configured with mobile radios on nearly all bands. Comm Support 131 is equipped with: (1 each) 800 MHz trunked EDACs radio (Oakland, Richmond, BART), (1 each) 800 MHz Motorola SmartNet II trunked radio (Alameda County and San Francisco), (2 each) UHF, including T-Band, (2 each) VHF analog, (1 each) VHF P25 or analog, (1 each) Low Band 30-42Mhz, (1 each)

Low Band 42-50 MHz, (1 each) Multi Band radio including HF, VHF and UHF, a Nextel phone and a PSTN interface card attached to the ACU-1000. The vehicle also carries cables for most common portable radios. The vehicle is equipped with a GlobalStar satellite phone, (3 each) cellular phones and (2 each) VoIP (via satellite) phones that can use the PSTN interface. Programming capability exists on board for all radios, except for the trunking capabilities of the 800 MHz radios.

Four additional Mobile Communications Centers are equipped with ACU-1000s, one at Richmond Fire (Comm Support 267), one at Contra Costa County Fire (Comm Support 302), one at Moraga-Orinda Fire (Comm Support 245) and one at the Contra Costa Sheriff's Department (Comm Support TEC-1). The three Fire vehicles have mobile radio capabilities similar to the San Ramon unit, with slightly less phone capability. The Sheriff's unit currently relies entirely on portable radios.

Contra Costa County also has four ACU-TAC units, carried in Communications Unit Leader (COML) vehicles. These units include most common portable radio cables and Nextel interfaces and each is equipped with a PSTN card. These units are covered under section 4.6 Stored Gateways.

4.4.2 Request for Gateway

FIXED GATEWAY: For a fixed gateway, 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 a patch by contacting their agency's dispatcher.

MOBILE OR STORED GATEWAY: For a mobile or stored gateway, when an emergency response event requires a gateway to perform interoperable communications, a partnering agency representative shall follow their own agency's procedures for requesting equipment. Typically, a user should request a gateway by contacting their agency's dispatcher, who will then contact the appropriate agency.

The dispatch center having jurisdiction over the location of the incident follows internal agency procedures to contact the COMC's and relays pertinent information regarding the event.

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

- User's agency
- On-scene agencies requiring interoperability
- Reason for request/type of event, i.e. emergency, etc.
- Equipment required
- Expected duration of event
- Location required/access information

- User/requestor and/or servicing dispatch contact phone number

In the event that the agency activates its own gateway, the COMC is notified and provided the above information.

The COMC determines what regional interoperability resources are available for use and identifies and activates a specific resource. For example, if a gateway is activated, the COMC contacts the Gateway Manager to activate that device.

The COMC coordinates the deployment by providing the contact information for the gateway to the Incident Commander or their designee.

4.4.3 Mobile and Stored Gateway Deployment

Upon receiving a request for the deployment of a mobile or stored gateway, the following guidelines should be followed:

Deployment Procedure-
Dispatcher:

- Contact the on-call gateway operator/technician responsible for mobile or stored gateway deployment
- Dispatch gateway operator to the incident scene
- Inform the requesting user that the mobile or stored gateway is en route

Gateway Operator:

- Respond to dispatcher with estimated time to retrieve mobile or stored gateway and estimated time to arrive on the incident scene
- Drive dedicated vehicle and mobile or stored gateway to the incident scene
- Report to the Incident Commander on arrival

4.4.4 Gateway Limitations

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

- **The number of simultaneous patches that can be supported by the ACU-1000s will be limited by switch capacity and the number of lines connecting control centers and consoles.** There are a maximum of two lines connecting a switch to any other switch, and a maximum of four lines connecting control center consoles to the respective co-located switch. As a result, a limited number of patches involving resources at different control points can be supported simultaneously. Likewise, a limited number of patches involving resources that are accessed through a communications center console may be supported simultaneously.

- **Home system coverage may limit communications:** If agencies gain connectivity through one of the control points, agencies will only maintain interoperable communications when in their home system coverage area. For example, if your agency's radio system does not operate at the Port of Oakland, gaining interoperability through the City of Oakland control point will not provide coverage at the Port**.**
- **Agencies not included in the list of participating agencies will require additional planning to establish interoperable communications**: Agencies not included in the table cannot establish direct interoperable communications with the link connected agencies without additional planning.
- **Additional time is required when a gateway has not been preprogrammed for outside agencies.**

4.4.5 Fixed Site Gateway Activation

Once authorization has been granted from an agency, each agency should follow their internal procedures for activating the connectivity.

Procedures for establishing communications connectivity include:

- Selection of a channel on system if necessary
- Verifying system-wide availability of required resources – coordination among control point dispatchers
- Providing radio call sign/designator information to connected agencies as needed
- Assigning the requested unit/agency to that channel
- Utilizing gateway site agency's internal procedures for establishing a patch between the agencies
- The control point dispatcher will connect the agency to the appropriate talk group
- Announcing to users that interoperability is activated
- Users should identify themselves on the interoperability channel using their agency name and unit identifier
- The dispatcher for the jurisdiction where the event is being worked shall monitor the interoperability channel to address requests

4.4.6 Fixed Site Gateway Deactivation

When the interoperable communications connection or patch 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 that the patch can be deactivated.
- If the connection does not include units from the control point dispatch jurisdictions, the requesting agency/user shall contact the control point dispatcher to deactivate the patch.

- The control point dispatcher shall make an announcement on the interoperable channel/talk group indicating that the connection will be deactivated prior to the connection being disabled.
- All personnel shall return to their appropriate home system channel assignments.

4.4.7 Fixed Site Test Procedure

To ensure that equipment components of the interoperability solution are operating properly, each agency will participate in the following testing procedure:

- A radio roll call will occur every Wednesday at 1000 hours on a predetermined channel/talkgroup.
- Each agency will enable the connectivity prior to the 1000 hours roll call.
- Beginning at 1000 hours, a control point dispatch center will initiate roll call by contacting each agency by name.
- Each agency shall respond when called.
- Dispatch personnel shall document and maintain a check list of agency responses for each roll call.
- After the roll call list is complete, the control point dispatcher shall attempt to contact each non-responsive agency one additional time.
- The control point dispatcher will make an official announcement, via radio, that the test is complete.
- Each dispatcher will deactivate the connectivity after roll call is complete.
- Agencies that do not respond to the roll call will be contacted by the control point dispatcher by phone to attempt to identify any issues or problems that precluded their participating in the test.
- If the issue or problem can be identified, dispatch personnel should agree on who shall take corrective action. If the issue or problem cannot be identified, the control point dispatcher shall contact the appropriate technical personnel to address the issue or problem.

4.4.8 Mobile and Stored Gateway Activation

In case the mobile or stored gateway has not been preset-up with the requesting agency radios, all agencies will be required to bring a portable radio and charger to connect to the gateway for the length of the operation. Gateway managers will ensure appropriate cables exist for area radios. Setup and installation of all radios will occur on-scene.

Gateways should be used as a last resort for Tactical Nets between agencies with disparate radio system bands. Gateways work well for Command Nets in a confined area of operation.

Activation Procedure-

Communications Unit Leader (COML):

- Require participating agencies to check in at the command post and provide portable radios and frequency/talkgroup channels for use during the incident
- Assign radio call sign/designator information to connected agencies
- Instruct gateway operator on where to setup and operate the mobile gateway
- Inform gateway operator what agencies are participating
- Provide gateway operator with agency provided radios and frequency/talk group channels to be used during the incident
- Confer with gateway operator concerning the command level or other specific talkgroups that need to be programmed into the mobile or stored gateway

Gateway Operator:

- Obtain agency radios and connect to the gateway with associated cables
- Select the channel or talkgroup assigned by the agency
- Assign the requested unit/agency to that channel or talkgroup as designated by the Incident Commander

4.4.9 Mobile and Stored Gateway Deactivation

When interoperable communications is no longer required, the gateway will be deactivated. Participating agencies are responsible for retrieving the portable radio provided during the operation.

Deactivation Procedure-

COML:

- Make an announcement on the command channel to all commanders to advise them the gateway is being deactivated
- Contact the gateway operator to shut down the mobile or stored gateway

Gateway Operator:

- Ensure agencies retrieve portable radios
- Take inventory of equipment and note any needing repair or replacement
- Return to pre-response location and make gateway ready for service

4.4.10 Mobile and Stored Gateway Testing

To ensure that equipment components of the interoperability solution are operating properly, each agency will participate in the following testing procedure:

- Representatives from each agency should meet on a regular basis to test the interoperability solution.
- Testing and training should include deployment, setup operation, and deactivation of the mobile gateway. Agency representatives should arrive at the test location to test their ability to communicate with other agencies utilizing the mobile gateway.
- If an issue or problem is identified during the testing procedure, personnel shall determine who will take corrective action. If the issue or problem can not be identified, personnel shall contact the appropriate technical personnel to address the issue or problem.

4.5 Shared Systems

If an individual responder needs to talk to an agency with which they do not otherwise have communications, the responder notifies dispatch that they need to operate on a shared channel/talkgroup.

- Dispatch or the responder can determine the appropriate channel/talkgroup.
- For an extended incident, the dispatcher is responsible for notifying the COMC that an interoperability channel is in use.
- When a responder is dispatched to an incident, each agency dispatcher is responsible for notifying responders what interoperability channel is being used for the incident.
- The Incident Commander determines when the interoperability channel is no longer required and notifies the dispatch center.

5 Plans for Tactical Communications during an Incident

5.1 Event

This plan is designed to cover interoperability needs for all-risk, multi-discipline incidents. The plan laid out in this section addresses the need for initial and sustained interoperable communications for the incident response.

Although no amount of planning can address every possible outcome during an event, a plan for interoperable communications is expected to have the following benefits:

1. A plan builds an understanding of available interoperable resources, their capabilities and their limitations as applied to a general type of incident. This knowledge can be used during events as well as in the development of future regional interoperability systems.
2. By planning the use of interoperable communication resources, agencies can equip, train, and develop procedures to ensure personnel have access to the communication resources needed.

5.2 Participating Functional Disciplines

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

- Area Search and Rescue Teams (SAR)
- Community Emergency Response Team (CERT)
- Education
- Emergency Management
- Emergency Medical Services (EMS)
- Environmental Health
- Explosive Ordnance Disposal (EOD)
- Fire
- HAZMAT
- Hospitals
- Law Enforcement
- Medical Examiner
- Military
- Non-governmental agencies/Organizations as deemed necessary
- Public Health
- Public Works
- Transportation
- Utilities

5.3 Incident Command Structure

Figure 1 shows an Incident Command System structure that would be generally appropriate for the level of incident addressed by this plan.

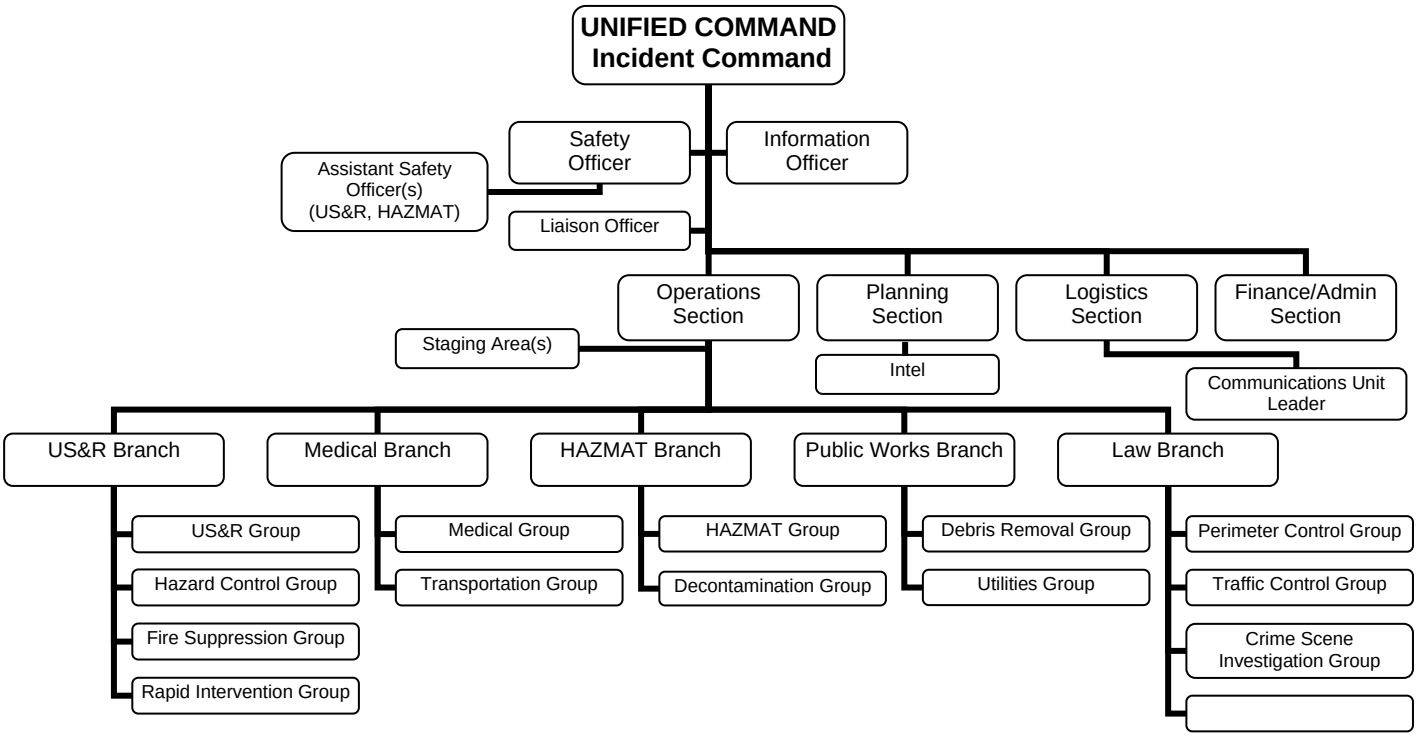


Figure 1. All Hazards ICS Structure

Appendix G provides sample ICS forms (ICS 201, ICS 202, etc.) for functional assignments of resources such as:

- Incident Command Staff
- Operations Section
- Planning Section
- Logistics Section
- Finance Section

5.4 Prioritizing Interoperable Communications

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

5.4.1 Priority Users

The incident commander or designee 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:

1. Unified Command Staff/Incident Command Staff
2. Operations Section Command and Branch Directors
3. EMS Group/Fire Service Branch/ Hospital Coordination
4. Law Enforcement Branch

5.5 Event Interoperable Communications Requirements

5.5.1 Unified Command Staff/Incident 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 or designee 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 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, swap radios, 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, e.g., face-to-face.

5.5.2 Operations Section Command and Branch Directors

The Operations Section in this event will need interoperable communications among section members that include the Fire Service Branch, Law Enforcement Branch, Air

Branch, and EMS Group. The Oakland/Alameda County/Contra Costa County Urban Area has identified this need 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; such as shared tactical channels, fixed or mobile gateways, or patches, one of the first actions of the Communications Unit Leader during an event must be to request these resources through the Logistics Section Chief.

At the discretion of the Incident Commander or designee, the steps below may be changed or combined dependant upon the incident.

For the Operations Section Chief and 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, channel should be used to establish communications.
3. If on-scene field responders operate on disparate systems and on different frequency bands, or common interoperable channels are not available to establish communications, a request should be made to make use of any gateway devices (e.g. console patch, etc.) that can interconnect the disparate radio systems of the agencies involved. Communication centers and the Communications Unit Leader or their designee will identify any available resources.
4. If no other resources are available, field responders can be linked via available swap radios.

5.5.3 EMS Group and Hospital Coordination

At the discretion of the Incident Commander or designee, the steps below may be changed or combined dependant upon the incident.

The EMS Group may need interoperable communications resources for directing triage, treatment and transport efforts and to support hospital diversion control, obtaining status reports and making other requests. Interoperable communications will be attempted in the following order:

1. If EMS Group responders are users of a shared system, the shared system will be used to establish interoperable communications.
2. If EMS Group responders operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications.
3. If EMS Group responders operate on disparate systems and on different frequency bands or common Interoperable Channels are not available to establish

interoperable communications, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the agencies involved. Communication centers and the Communications Unit Leader (or their designee) will identify any available resources.

5.5.4 Fire Service Branch

At the discretion of the Incident Commander or designee, the steps below may be changed or combined dependant upon the incident.

The Fire Service Branch may need interoperable communications resources for directing fire suppression efforts, hazardous materials response, and search and rescue response. Interoperable communications will be attempted in the following order:

1. If Fire Service Branch responders are users of a shared system, the shared system will be used to establish interoperable communications.
2. If Fire Service Branch responders operate on disparate systems within the same frequency band, a mutual aid channel should be used to establish interoperable communications.
3. If Fire Service Branch responders operate on disparate systems and on different frequency bands or common interoperable channels are not available to establish interoperable communications, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the agencies involved. Communication centers and the Communications Unit Leader or their designee will identify any available resources.
4. If no other resources are available, field responders can be linked via available swap radios.

5.5.5 Law Enforcement Branch

At the discretion of the Incident Commander or designee, the steps below may be changed or combined dependant upon the incident.

The Law Enforcement Branch may need interoperable communications resources for directing outer perimeter security, evacuation, explosive ordnance disposal, investigations, and traffic/crowd control efforts. 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 Interoperable Channels are not available to

establish interoperable communications, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the agencies involved. Communication centers and the Communications Unit Leader or their designee will identify any available resources.

4. If no other resources are available, field responders can be linked via available swap radios.

5.6 Communications Unit Leader Responsibility

The Communications Unit Leader has the responsibility to manage the communications function of the incident including operational and technical aspects. 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.

6 NIMS Communications Unit Leader Training

6.1 Training Requirements and Certification

The Communications sub-committee will within one year of the adoption of this TIC Plan establish a training program to ensure adequate staff are trained as Communication Unit Leaders as defined by the NIMS model. The Communications Unit Leaders should be trained and certified in accordance with NIMS/ ICS standards. The Communications Unit Leader on any given incident should be prepared to perform the following job tasks:

NIMS COMMUNICATIONS UNIT LEADER CORE COMPETENCIES

1. Employing agency must support development of the COML position, including necessary equipment for incident response

2. COML must have basic supervisory skills.

3. COML must have knowledge of applicable local, state and Federal labor practices and regulations.

4. COML must have appropriate personnel management skills.

5. COML must have required risk management training and be able to apply appropriate risk management and hazard mitigation processes.

6. COML must be available during on-call period and able to respond within established agency and regional guidelines.

7. COML must be able to multi-task around a potentially significant workload.

8. COML must have a good working knowledge of the ICS.

9. COML must have a good working knowledge of the Multi-agency Coordination System applicable to the region.

10. COML must have excellent organization and planning skills and be able to apply them while under significant job pressure.

11. COML must have a good working knowledge of agencies, geography, resources, topology and politics within the region.

12. COML must possess a good working knowledge of regional communications procedures and protocols in order to properly inventory and size resource orders.

13. COML must have a good working knowledge of Joint Powers Agreements, Memorandums of Agreement/Understanding, and related governance documents for the region.

14. COML must have a good working knowledge of communications resources available within the region, as well as outside of the region (other regions, State, Federal, etc). This knowledge must include general operational and technical specifics for these resources.

15. COML must have basic radio and telephone engineering knowledge and RF design skills needed to do coverage, interference mitigation and system designs required for incident communications.

16. COML must have a good understanding of frequency coordination processes, including how to rapidly obtain Station Temporary Authorizations from the FCC, and to work with four FCC-designated Public Safety Frequency Coordinators to identify new resources and mitigate interference problems.

17. COML must be competent at equipment installation for the types of communications equipment normally encountered in the region, including radio programming.

18. In addition to having required risk management training and being able to apply appropriate risk management and hazard mitigation processes, COML must be aware of applicable Occupational Safety & Health Administration Radio Frequency exposure rules and standards.

19. COML must be able to communicate effectively, efficiently and at the appropriate level with a wide variety of people outside of the Communications Unit in order to quickly accomplish training in the field.

6.2 Communications Unit Leaders

The ICPG will make every effort to establish a certification program for Communication Unit Leaders within one year of the release of the requirements of the NIMS model. The Communications Unit Leaders should be trained and certified in accordance with the NIMS/ICS standards when these standards are determined. The names and contact information listed in Appendix F are qualified by the National Wildland Coordinating Group (NWCG) as Communications Unit Leaders. NWCG 310-1 is currently the only standard for Communications Unit Leaders. The list will be updated once the standards are determined and people are trained.

6.3 Communications Unit Leader Training Review

The Communications Sub-Committee will meet at least once a year to:

- Establish and review training requirements for Communications Unit Leaders
- Establish the annual training calendar
- Determine criteria for personnel to be trained

Table 1. Training Objectives

Training	Objective
Communication Unit Leader	To familiarize Communications Unit Leaders with their role within the NIMS model & the regional TIC Plan
Policies/Procedures for Interoperability Equipment	To familiarize Communications Unit Leaders with Regional Interoperability Standard Operating Procedures
Shared Channels	To familiarize Communications Unit Leaders with technical specifics on the region's shared channel systems
Fixed Site and Mobile Gateways	To familiarize Communications Unit Leaders with technical specifics on the region's fixed site and mobile gateways
Shared Systems	To familiarize Communications Unit Leaders with technical specifics on the region's shared systems

Appendix A Technical Interoperability Communications Plan Points of Contact and Interoperable Communications Project Group Contact

This list provides a contact for the administration of the Tactical Interoperable Communications Plan. For deployment of any mutual aid resource, follow individual departmental procedures in accordance with the Incident Command System.

AGENCY NAME	POINT OF CONTACT	E-MAIL	PHONE
Alameda County Fire	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Alameda County GSA	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Alameda County Probation	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Alameda County Sheriff Transit	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Alameda County Sheriff's Office	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Contra Costa County Sheriff's	Terry Betts	tbett@so.cccounty.us	(925) 313-2453
Contra Costa County Fire District – Martinez, Concord, Pleasant Hill, Clayton, Walnut Creek, Pittsburg, Antioch, Lafayette, San Pablo	Brent Finster	bfinster@cccfpd.org	(925) 941-3550
East Contra Costa Fire – Brentwood, Oakley, Byron, Discovery Bay	Brent Finster	bfinster@cccfpd.org	(925) 941-3550
San Ramon Valley Fire District – Danville, San Ramon, Alamo	Chris Suter	csuter@srvfire.ca.gov	
Alameda Fire	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789

AGENCY NAME	POINT OF CONTACT	E-MAIL	PHONE
Alameda Police	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Antioch Fire	See Contra Costa County Fire		
BART	Tom Herold	therold@bart.gov	(510) 464-6535
Berkeley Fire	Mike Loyola	mloyola@ci.berkeley.ca.us	(510) 644-6622 x220
Berkeley Police	Mike Loyola	mloyola@ci.berkeley.ca.us	(510) 644-6622 x220
Brentwood Fire	See East Contra Costa Fire		
Byron Fire	See East Contra Costa Fire		
Clayton Fire	See Contra Costa County Fire		
Concord Fire	See Contra Costa County Fire		
Concord Police	Craig Oelrich	craigo@cpd.ci.concord.ca.us	(925) 671-3265
Crockett/Carquinez Fire	Paul Contestable		(510) 787-3413
Discovery Bay Fire	See East Contra Costa Fire		
Dublin Police	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
East Bay MUD	Ed Sullivan	esulliva@ebmud.com	(510) 287-7032
East Bay Regional Parks	Steve Crudo	scrudo@ebparks.org	(510) 544-3006
El Cerrito Fire	Mark Gagan	Mark.gagan@ci.richmond.ca.us	(510) 620-6660
El Cerrito Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
Emeryville Fire	John Arenz	jarenz@ci.emeryville.ca.us	(510) 596-3757
Emeryville Police	John Arenz	jarenz@ci.emeryville.ca.us	(510) 596-3757
Hayward Fire	Desi Calzado	Desi.calzado@hayward-ca.gov	(510) 293-7181
Hayward Police	Desi Calzado	Desi.calzado@hayward-ca.gov	(510) 293-7181
Hercules Fire	See Rodeo/Hercules Fire		
Hercules Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
Kensington Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
LLNL	Chuck Berdan	Berdan1@llnl.gov	(925) 423-1803

AGENCY NAME	POINT OF CONTACT	E-MAIL	PHONE
Lafayette Fire	See Contra Costa County Fire		
Livermore Fire	Rhonda Bishop	rbishop@ci.livermore.ca.us	(925) 371-4921
Livermore Police	Rhonda Bishop	rbishop@ci.livermore.ca.us	(925) 371-4921
Martinez Fire	See Contra Costa County Fire		
Martinez Police	Mark Smith	msmith@cityofmartinez.org	(925) 372-3447
Moraga/Orinda Fire	Ed Borden	eborden@mofd.org	(925) 258-4500
Moraga Police	Kenneth Tom	ttkentom@aol.com	(925) 376-0533
Newark Fire	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Newark Police	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Oakland Fire	Bob Glaze	Bglaze@oaklandnet.com	(510) 238-2930
Oakland Housing Authority	Bob Glaze	Bglaze@oaklandnet.com	(510) 238-2930
Oakland Police	Bob Glaze	Bglaze@oaklandnet.com	(510) 238-2930
Oakland Public Schools	Bob Glaze	Bglaze@oaklandnet.com	(510) 238-2930
Oakley Fire	See East Contra Costa Fire		
Piedmont Fire	John Speakman	jspeakman@piedmont.com	(866) 545-2800
Piedmont Police	John Hunt	jhunt@piedmont.com	(510) 238-3014
Pinole Fire	Jim Parrot	jparrott@ci.pinole.ca.us	(510) 724-8974
Pittsburg Fire	See Contra Costa County Fire		
Pleasant Hill Fire	See Contra Costa County Fire		
Pleasanton Fire	Rhonda Bishop	rbishop@ci.livermore.ca.us	(925) 371-4921
Pleasanton Police	Margaret Mary Goulart	mgoulart@ci.pleasanton.ca.us	
Pinole Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
Port of Oakland	Mike O'Brien	mobrien@portoakland.com	(510) 627-1303
Richmond Fire	Jim Fajardo	James_fajardo@ci.richmond.ca.us	(510) 307-8039
Richmond Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
Rodeo/Hercules Fire	Alan Biagi	biagi@rhfd.org	(510) 799-4561
San Leandro Fire	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789

AGENCY NAME	POINT OF CONTACT	E-MAIL	PHONE
San Leandro Police	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
San Pablo Fire	See Contra Costa County Fire		
San Pablo Police	Alfredo Gonzalez or Margaret Hembree	Alfredo_gonzalez@ci.richmond.ca.us or Margaret_hembree@ci.richmond.ca.us	(510) 620-6679 or (510) 620-6550
UC Berkeley Police	Carl Woo	cwoo@uclink.berkeley.edu	(510) 642-8097
Union City Fire	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Union City Police	Randy Hagar	Randall.hagar@acgov.org	(510) 208-9789
Walnut Creek Fire	See Contra Costa County Fire		
Caltrans	Kitashi Tokango		916-654-5750
CHP	Angela Azevedo	aazevedo@chp.ca.gov	(916) 375-2901
State OES	George Lowry	George.lowry@oes.ca.gov	(916) 845-8608
AC Transit	Alameda or Contra Costa County S.O.		

INTEROPERABLE COMMUNICATIONS PROJECT GROUP				
	Governance Committee	Bill McCammon	bill.mccammon@acgov.org	(510) 618-3490
		Robert Maginnis	rmagginis@acgov.org	(510) 208-9966
	Technical Advisory Committee	Randall Hagar	randall.hagar@acgov.org	(510) 351-2020
		Bob Glaze	bglaze@oaklandnet.com	(510) 238-2930
	Operations Committee	Rod Golphin	rgolphin@oaklandnet.com	(510) 777-8911
		Rocky Medeiros	r.medeiros@acgov.org	(925) 803-7800
COMMUNICATIONS COORDINATORS (COMC)				
	Region			**24 Hour Phone**
	Oakland	Bob Glaze	bglaze@oaklandnet.com	(510) 238-4036
	Alameda County	Randall Hagar	randall.hagar@acgov.org	(510) 351-2020
	Contra Costa County – Law	Lisa Hoffman	lhoff@so.cccounty.us	(925) 646-2441
	Contra Costa County – Fire	Brent Finster	bfinster@cccfpd.org	(925) 941-3550
TIC PLAN				
	OAC Urban Area	Susan Newton	snewton@oaklandnet.com	(510) 238-2985

Appendix B Swap Radios

Detailed information on all radio caches available for use within the region are listed in subsequent pages of Appendix B. The table below lists the county, agency, quantity of gateways and type of each radio cache. The appendix section corresponding to each gateway is also listed.

Table 2. Index of Swap Radios (Radio Caches) in the Urban Area

Appendix	Responsible Agency	Cache Name	Quantity	Type
	Oakland	No preprogrammed cache	0	
B.1	Alameda County	Alameda County OES	100	Motorola 800 MHZ trunked
B.2	Contra Costa County Sheriff's Office	Contra Costa OES	90	VHF Hi-band
B.3	Contra Costa Fire	Contra Costa Regional Incident Support	320	Bendix-King DPH P25 VHF
	Livermore/Pleasanton	No preprogrammed cache	0	
	Richmond	Information not provided	-	
	UC Berkeley	No preprogrammed cache	0	

All VHF radio long term deployed caches are required to have the following channels programmed:

Frequency	CTCSS	Description
154.920/154.920	None	Law Enforcement Emergency
154.265/154.265	None	Fire Mutual Aid (red)
154.280/154.280	None	Fire Mutual Aid (white)
154.295/154.295	None	Fire Mutual Aid (blue)

All UHF radio long term deployed caches are required to have the following channels programmed:

Frequency	CTCSS	Description
460.275/465.275	None	Law Enforcement Emergency
463.175/463.175	167.9	MED 8 EMS Medical Resource & Scene Coordination (Talk Around Mode)

All 800 MHz radio long term deployed caches are required to have the following channels programmed:

Frequency	CTCSS	Description
866.0125/821.0125	None	8CAL90D NSPAC National Calling Channel
866.5125/821.5125	None	8TAC91D NSPAC National Tactical Channel 1
867.0125/822.0125	None	8TAC92D/MA-TAC2 NSPAC National Tactical Channel 2
867.5125/822.5125	None	8TAC93D/MA-TAC3 NSPAC National Tactical Channel 3
868.0125/823.0125	None	8TAC94D/MA-TAC4 NSPAC National Tactical Channel 4

B.1 Alameda County

Radio Cache Information:

Radio Cache Name:	Alameda County OES
Equipment Storage Location:	EOC Dublin CA
Responsible Agency:	Alameda County Sheriff's Department
Radio Cache Point of Contact:	Capt. Rocky Medeiros
Radio Cache Point of Contact Title:	Director OES
Point of Contact Email:	r.medeiros@acgov.org
Point of Contact Phone:	(925) 803-7800
Service Area (Available Area for Deployment):	Alameda County Op Area
Quantity of Radios:	100 portables in 8 groups of 12 portable radios each plus an extra 4; Single unit and gang unit chargers; Lapel microphones, etc.
Frequency Band (VHF, UHF, etc.):	800 MHz
Make of Radios:	Motorola P25/SmartNet II
Model of Radios:	XTS 2500 (P25 ready) trunked 700/800 MHz
Quantity of Spare Batteries Included:	12
Number of Available Channels:	21 frequencies preprogrammed in plus 10 Interoperable Channels, with additional capacity for over 200 more modes or talkgroups
Other Notes:	These kits will soon be packaged in rapid deployment transportable cases with all accessories, stored at County EOC

Radio Cache Programming:

Channel Number	Frequency (Tx/Rx) or System Talk Group	Name or Designation	Description
1	”A” zone is Alameda County’s trunked radio system	**21 Channels as requested by user. See attached document “A ZONE”**	Trunked SmartNet II talkgroups
2	“B” zone can be programmed to any outside agency Motorola trunked system per users requests	**Out of Area Motorola trunked system, i.e., San Francisco Sacramento UC Berkeley**	
3	“C” zone is preprogrammed for the 10 State mutual aid 800 MHz frequencies; see attached for list of frequencies	**See attached document “C Zone”**	

“A ZONE”					
Alameda County's SmartNet II Subscribers					
NAME	**#**	**INPUT**	**OUTPUT**	**TONE**	
ALCO trunk channel 1	T1	821.1500		866.1500	none
ALCO trunk channel 2	T2	821.4250		866.4250	none
ALCO trunk channel 3	T3	821.8000		866.8000	none
ALCO trunk channel 4	T4	821.9375		866.9375	none
ALCO trunk channel 5	T5	822.1500		867.1500	none
ALCO trunk channel 6	T6	822.2500		867.2500	none
ALCO trunk channel 7	T7	822.4000		867.4000	none
ALCO trunk channel 8	T8	822.6750		867.6750	none
ALCO trunk channel 9	T9	822.7750		867.7750	none
ALCO trunk channel 10	T10	822.9250		867.9250	none
ALCO trunk channel 11	T11	823.0375		868.0375	none
ALCO trunk channel 12	T12	823.0875		868.0875	none
ALCO trunk channel 13	T13	823.2000		868.2000	none
ALCO trunk channel 14	T14	823.2250		868.2250	none
ALCO trunk channel 15	T15	823.2750		868.2750	none
ALCO trunk channel 16	T16	823.3625		868.3625	none
ALCO trunk channel 17	T17	823.4375		868.4375	none
ALCO trunk channel 18	T18	823.6500		868.6500	none
ALCO trunk channel 19	T19	823.7125		868.7125	none
ALCO trunk channel 20	T20	823.7625		868.7625	none
ALCO trunk channel 21	T21	823.9250		868.9250	none

"C ZONE"			
Alameda County's SmartNet II Subscribers			
Switch position	**Label-Prefix**	***Label**	**Operation**
1	C1	IA LAW	TG
2	C2	IA LAW	TG
3	C3	IA LAW	TG
4	C4	HAIL	Conv
5	C5	STATE TAC 1	Conv
6	C6	STATE TAC 2	Conv
7	C7	STATE TAC 3	Conv
8	C8	STATE TAC 4	Conv
9	C9	HIGH LEVEL LAW	Conv
10	C10	HIGH LEVEL FIRE	Conv
11	C11	LOW LEVEL LAW	Conv
12	C12	LOW LEVEL FIRE	Conv
13	C13	MA TC1	TG
14	C14	MA TC2	TG
15	C15	xxxxx	
16	C16	xxxxx	
		*Label will be reprogrammed to conform with CALSIEC nomenclature	

ALAMEDA COUNTY 800 MHz CONVENTIONAL MUTUAL AID REPEATERS

	CHANNEL NAMES									
GSA - LAKESIDE	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW			Sheriff and County Fire
OAKLAND									Downtown Oakland	
Bal Peak	HAIL	HLFIRE	HLLAW						Berkeley, Oakland and Orinda	Sheriff and County Fire
Contra Costa County										
HIGLAND HOSPITAL # 1	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW		Oakland, Alameda, San Leandro,	Alameda Police, San Leandro Police, Sheriff, County Fire
OAKLAND (Coliseum coverage)										
HIGHLAND HOSPITAL # 2	HAIL	STTAC 1	STTAC 2	STTAC3	STTAC 4	LLFIRE	LLLAW		Oakland, Alameda, San Leandro,	Alameda Police, San Leandro Police, Sheriff, County Fire
OAKLAND (Coliseum coverage)										
SAN LEANDRO HILLS	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW		San Leandro, Hayward, Castro Valley	San Leandro Police, Sheriff, County Fire
SAN LEANDRO										
HAYWARD HALL OF JUSTICE	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW		San Lorenzo, Hayward	Sheriff, County Fire
HAYWARD										
COYOTE HILL	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW		Union City, Fremont, Newark, Hayward	Union City Police, Fremont Police, Newark Police and Fire, County Fire
FREMONT										
SUNOL RIDGE	HAIL	HLFIRE	HLLAW						Sunol, Niles Canyon, Palomars Canyon, Pleasanton, Fremont, Newark	Sheriff, County Fire, Fremont Police, Newark Police and Fire
SUNOL										
SANTA RITA JAIL	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW		Dublin	Sheriff and County Fire
DUBLIN										
CRANE RIDGE	HAIL	HLFIRE	HLLAW						Livermore, Altamont, Dublin, Pleasanton, Mines Road	Sheriff and County Fire
LIVERMORE										
Latt/Longs:						**TX Power**	**Antenna**			
COYOTE HILLS- COY		37.32.26		122.04.53		30 Watt	3 dB OMNI			
SAN LEANDRO HILLS- SLH		37.43.27		122.07.07		30 Watt	3 dB OMNI			
LAKESIDE PLAZA- LKS		37.48.07		122.15.51		30 Watt	3 dB OMNI			
WALPERT RIDGE- WAL		37.39.20		122.00.05		30 Watt	3 dB OMNI			
SUNOL RIDGE- SNL		37.37.12		121.55.17		30 Watt	3 dB OMNI			
CRANE RIDGE- CRN		37.36.22.		121.37.11		30 Watt	3 dB OMNI			
FREMONT POLICE- FPD		37.33.01		121.58.06		30 Watt	3 dB OMNI			
GRIZZLY PEAK		37 53 01.1		122 13 19.0		30 Watt	3 dB OMNI			
HIGHLAND GENERAL HOSPITAL- HGH		37.47.54.7		122.13.52.8		30 Watt	3 dB OMNI			
SANTA RITA JAIL - SRS		37.43.12.7		121.53.23.8		30 Watt	3 dB OMNI			
HAYWARD HALL JUSTICE - HHJ		37.39.24.7		122.05.39.8		30 Watt	3 dB OMNI			
MUT AID	866.9125	821.9125	156.7 / 5A	LOW LEVEL FIRE						
MUT AID	866.2000	821.2000	156.7 / 5A	LOW LEVEL LAW						
MUT AID	868.9875	823.9875	156.7 / 5A	HIGH LEVEL FIRE						

B.2 Contra Costa County Sheriff's Office

Radio Cache Information

Radio Cache Name:	Contra Costa OES
Equipment Storage Location:	Contra Costa Sheriff's Office 50 Glacier Dr. Martinez, Ca. 94553
Responsible Agency:	Contra Costa Sheriff's Office
Radio Cache Point of Contact:	Eric Christenson
Radio Cache Point of Contact Title:	Contra Costa Law Enforcement Mutual Aid Coordinator
Point of Contact Email:	echri@so.cccounty.us
Point of Contact Phone:	925-646-4461
Service Area (Available Area for Deployment):	Contra Costa County
Quantity of Radios:	90
Frequency Band (VHF, UHF, etc.):	VHF
Make of Radios:	Bendix King
Model of Radios:	DPH5102
Quantity of Spare Batteries Included:	0
Number of Available Channels:	500
Other Notes:	Programmed with 20 zones, 16 channels/zone. All required channels included.

Radio Cache Programming for Contra Costa County

List Follows

B.3 Contra Costa County Fire Services

Radio Cache Information

Radio Cache Name:	Contra Costa Regional Incident Support
Equipment Storage Location:	Decentralized at 11 locations throughout Contra Costa County
Responsible Agency:	Contra Costa County Fire Protection District (Fire & Rescue Operational Area Coordinator)
Radio Cache Point of Contact:	Brent Finster
Radio Cache Point of Contact Title:	Telecommunications Manager
Point of Contact Email:	bfinster@cccfpd.org
Point of Contact Phone:	925-941-3550 office or 925-890-1150 cell
Service Area (Available Area for Deployment):	Contra Costa County 100% 50% of cache is available for deployment to incidents outside Contra Costa County
Quantity of Radios:	320
Frequency Band (VHF, UHF, etc.):	VHF P25
Make of Radios:	Bendix-King
Model of Radios:	DPH5102X
Quantity of Spare Batteries Included:	1000's (all radios use AA battery clamshells – rechargeable batteries are not used)
Number of Available Channels:	500
Other Notes:	Radios are pre-programmed with all VHF interoperability channels, law enforcement and fire channels utilized in Contra Costa County, adjacent county's fire channels, and the CDF/OES channel plan

Radio Cache Programming for Contra Costa County

List Follows:

B.3.1 CCRIS-Communications Equipment Resource Status (Addendum 1)

CCRIS-COMMUNICATIONS EQUIPMENT RESOURCE STATUS

UPDATES? Call 925-941-3355 or 1-866-XCC FIRE

COMMUNICATIONS SUPPORT VEHICLES:

Comm Support 131	Type 1	SRM Comm	**AVAILABLE**
Comm Support 245	Type 2	MOR Station 45	**AVAILABLE**
Comm Support 267	Type 2	RMD Station 67	**NOT IN SERVICE YET**
Comm Support SAR	Type 2	CCCSO OES	**NOT IN SERVICE YET**
Comm Support 302	Type 3 Interoperability Shelter	CCRFCC	**NOT IN SERVICE YET**

PORTABLE RADIO KITS:

PRK-V-A	Portable Radio Kit A	16 Bendix-King VHF GPH	CCRFCC	**AVAILABLE**
PRK-V-B	Portable Radio Kit B	16 Bendix-King VHF GPH	CCRFCC	**AVAILABLE**
PRK-V-C	Portable Radio Kit C	16 Bendix-King VHF GPH	CCC Sta. 82	**AVAILABLE**
PRK-V-D	Portable Radio Kit D	16 Bendix-King VHF GPH	CCC Sta. 82	**AVAILABLE**
PRK-V-E	Portable Radio Kit E	16 Bendix-King VHF GPH	RMD Sta. 67	**AVAILABLE @ CCRFCC**
PRK-V-F	Portable Radio Kit F	16 Bendix-King VHF GPH	RMD Sta. 67	**AVAILABLE @ CCRFCC**
PRK-V-G	Portable Radio Kit G	16 Bendix-King VHF GPH	SRM Comm	**AVAILABLE**
PRK-V-H	Portable Radio Kit H	16 Bendix-King VHF GPH	SRM Comm	**AVAILABLE**
PRK-V-J	Portable Radio Kit J	16 Bendix-King VHF DPH	CCRFCC	**AVAILABLE @ STA. 82**
PRK-V-K	Portable Radio Kit K	16 Bendix-King VHF DPH	CCRFCC	**AVAILABLE @ STA. 82**
PRK-V-L	Portable Radio Kit L	16 Bendix-King VHF DPH	CCC Sta. 82	**AVAILABLE @ STA. 82**
PRK-V-M	Portable Radio Kit M	16 Bendix-King VHF DPH	CCC Sta. 82	**AVAILABLE @ STA. 82**
PRK-V-N	Portable Radio Kit N	16 Bendix-King VHF DPH	SRM Comm – CS131	**AVAILABLE @ CS131**
PRK-V-P	Portable Radio Kit P	16 Bendix-King VHF DPH	SRM Comm – CS131	**AVAILABLE @ CS131**
PRK-V-Q	Portable Radio Kit Q	16 Bendix-King VHF DPH	RMD Sta. 67 – CS267	**AVAILABLE @ STA. 82**
PRK-V-R	Portable Radio Kit R	16 Bendix-King VHF DPH	MOR Sta. 45 – CS245	**AVAILABLE @ STA. 82**
PRK-V-S	Portable Radio Kit S	16 Bendix-King VHF DPH	CCCSO OES	**PRE-STAGED – Mobile Field Force**
PRK-V-T	Portable Radio Kit T	16 Bendix-King VHF DPH	CCCSO OES	**PRE-STAGED – Mobile Field Force**
PRK-V-U	Portable Radio Kit U	16 Bendix-King VHF DPH	CCCSO OES	**PRE-STAGED – Mobile Field Force**
PRK-V-V	Portable Radio Kit V	16 Bendix-King VHF DPH	CCCSO OES	**PRE-STAGED – Mobile Field Force**
PRK-U-01	Logistics Radio Kit A	16 Motorola UHF	SRM Comm - CS131	**AVAILABLE @ CS131**
STL-01	Strike Team Leader Kit	7 Bendix-King VHF EPH	CCRFCC	**AVAILABLE**
STL-02	Strike Team Leader Kit	7 Bendix-King VHF EPH	CCC Sta. 81	**AVAILABLE**
STL-03	Strike Team Leader Kit	7 Bendix-King VHF EPH	POE Sta. 73	**NOT IN SERVICE YET**
STL-04	Strike Team Leader Kit	7 Bendix-King VHF EPH	SRM Comm	**NOT IN SERVICE YET**

PORTABLE REPEATER KITS:

RPT-V-01	Portable Repeater Kit	Motorola VHF	CCRFCC	**AVAILABLE**
RPT-V-02	Portable Repeater Kit	Motorola VHF	SRM Comm	**AVAILABLE @ CS131**
RPT-V-03	Portable Repeater Kit	Motorola VHF	RMD Sta. 67	**AVAILABLE**
RPT-V-04	Portable Repeater Kit	Motorola VHF	CCC Sta. 82	**AVAILABLE**
RPT-U-05	Portable Repeater Kit	Motorola UHF	CCRFCC	**NOT IN SERVICE YET**
RPT-X-06	Portable Repeater Kit	Motorola Crossband VHF-UHF	CCRFCC	**AVAILABLE**

INTEROPERABILITY BOXES:

ACU-01	JPS ACU-1000	Interoperability Gateway	SRM CS 131	**AVAILABLE**
ACU-02	JPS ACU-1000	Interoperability Gateway	RMD CS 267	**NOT IN SERVICE YET (RMD Admin)**
ACU-03	JPS ACU-1000	Interoperability Gateway	MOR CS 245	**AVAILABLE**
ACU-04	JPS ACU-1000	Interoperability Gateway	CCC CS 302	**NOT IN SERVICE YET (CS302)**
ACU-05	JPS ACU-1000	Interoperability Gateway	CCCSO SAR	**NOT IN SERVICE YET (M. Patterson)**
ACU-06	JPS ACU-1000	Interoperability Gateway	Kregor Peak	**NOT IN SERVICE YET (C. Suter)**
ACU-07	JPS ACU-1000	Interoperability Gateway	Bald	**NOT IN SERVICE YET (C. Suter)**
ACU-T-08	JPS ACU-TAC	Interoperability Gateway	CCRFCC	**AVAILABLE (1150's vehicle)**
ACU-T-09	JPS ACU-TAC	Interoperability Gateway	CCRFCC	**AVAILABLE (1153's vehicle)**
ACU-T-10	JPS ACU-TAC	Interoperability Gateway	SRM Comm	**AVAILABLE (3101's vehicle)**
ACU-T-11	JPS ACU-TAC	Interoperability Gateway	RMD Sta. 67	**NOT IN SERVICE YET (RMD Admin)**

MISCELLANEOUS:

MISC-01	INMARSAT	Magnavox Inmarsat Satellite	CCRFCC	**AVAILABLE**
MISC-02	AIRCRAFT	Icom Aircraft Base	CCRFCC	**AVAILABLE**
MISC-03	HF/SECURE	Motorola HF 1-30 MHz. Base	CCRFCC	**AVAILABLE**
MISC-04	NEXTEL	Nextel Kit (quantity 6)	CCRFCC	**AVAILABLE**
MISC-05	CELLULAR	Cellular Kit (6 AT&T, 6 Verizon)	CCRFCC	**AVAILABLE**
MISC-06	GLOBALSTAR	Globalstar Portable Satellite	CCRFCC	**AVAILABLE (1150's vehicle)**
MISC-07	GLOBALSTAR	Globalstar Portable Satellite	CCRFCC	**AVAILABLE (1153'S vehicle)**

Appendix C Shared Channels

Detailed information on all shared channels available for use within the region is listed in subsequent pages of Appendix C. The complete Universal Licensing System (ULS) data is available at http://wireless.fcc.gov/uls/.

Table 3. Index of Emergency and Mutual-Aid Frequencies

Oakland - Alameda County - Contra Costa County Urban Area Interoperability Channel Plan

April, 2006

CALIFORNIA CHANNEL NAME	NCC CHANNEL NAME***	Rx FREQ	Rx CTCSS		Tx FREQ	Tx CTCSS		Emis-sion	Power	CHANNEL USAGE	Available by Discipline		
											Law	Fire	EMS
Low Band													
CLEMARS 6	3LAW1	39.4600	none		39.4600	none		W	H	CLEMARS 7 Talkaround	Law		
CLEMARS 7	3LAW3	39.4600	none		45.8600	none		W	H	Law Enforcement Calling & Tactical	Law		
VHF High Band													
CALCORD	<TBD>	156.0750	none		156.0750	none		W	H	Multi-Discipline Command & Coordination	Law	Fire	EMS
CLEMARS 1	<TBD>	154.9200	none		154.9200	none		W	H	Law Enforcement Tactical	Law		
CLEMARS 2	<TBD>	154.9350	none		154.9350	none		W	10 watts	Law Enforcement Tactical	Law		
NALEMARS	1LAW16	155.4750	none		155.4750	none		W	H	Law Enforcement Tactical - Nationwide	Law		
VCALL	1CAL18	155.7525	156.7	5A	155.7525	156.7	5A	N	H	Public Safety Calling	Law	Fire	EMS
VTAC 1	1TAC5	151.1375	156.7	5A	151.1375	156.7	5A	N	H	Public Safety Tactical	Law	Fire	EMS
VTAC 2	1TAC13	154.4525	156.7	5A	154.4525	156.7	5A	N	H	Public Safety Tactical	Law	Fire	EMS
VTAC 3	1TAC22	158.7375	156.7	5A	158.7375	156.7	5A	N	H	Public Safety Tactical	Law	Fire	EMS
VTAC 4	1TAC23	159.4725	156.7	5A	159.4725	156.7	5A	N	H	Public Safety Tactical	Law	Fire	EMS
WHITE 1	1FIR9	154.2800	none		154.2800	none		W	H	Fire Calling		Fire	
WHITE 2	1FIR7	154.2650	none		154.2650	none		W	H	Fire Tactical		Fire	
WHITE 3	1FIR11	154.2950	none		154.2950	none		W	H	Fire Tactical		Fire	
UHF													
CLEMARS 4	<TBD>	460.0250	none		460.0250	none		W	H	Law Enforcement	Law		
CLEMARS 5	<TBD>	460.0250	none		465.0250	none		W	H	Law Enforcement	Law		
UCALL	4CAL27	453.2125	156.7	5A	458.2125	156.7	5A	N	H	Public Safety Calling Repeater	Law	Fire	EMS
UCALL TA	4CAL27D	453.2125	156.7	5A	453.2125	156.7	5A	N	H	UCALL Talkaround	Law	Fire	EMS
UTAC1	4TAC28	453.4625	156.7	5A	458.4625	156.7	5A	N	H	Public Safety Tactical Repeater	Law	Fire	EMS
UTAC1 TA	4TAC28D	453.4625	156.7	5A	453.4625	156.7	5A	N	H	UTAC1 Talkaround	Law	Fire	EMS
UTAC2	4TAC29	453.7125	156.7	5A	458.7125	156.7	5A	N	H	Public Safety Tactical Repeater	Law	Fire	EMS
UTAC2 TA	4TAC29D	453.7125	156.7	5A	453.7125	156.7	5A	N	H	UTAC2 Talkaround	Law	Fire	EMS
UTAC3	4TAC30	453.8625	156.7	5A	458.8625	156.7	5A	N	H	Public Safety Tactical Repeater	Law	Fire	EMS
UTAC3 TA	4TAC30D	453.8625	156.7	5A	453.8625	156.7	5A	N	H	UTAC3 Talkaround	Law	Fire	EMS
800 MHz.													
CLEMARS 8	<TBD>	868.5125	156.7	5A	868.5125	156.7	5A	W	H	CLEMARS 9 Talkaround	Law		
CLEMARS 9	<TBD>	868.5125	156.7	5A	823.5125	156.7	5A	W	H	Law High Level Repeater**	Law		
CLEMARS 20	<TBD>	866.2000	156.7	5A	866.2000	156.7	5A	W	H	CLEMARS 21 Talkaround	Law		
CLEMARS 21	<TBD>	866.2000	156.7	5A	821.2000	156.7	5A	W	H	Law Low Level Repeater - BART Underground	Law		
FIREMARS	<TBD>	868.9875	156.7	5A	823.9875	156.7	5A	W	H	Fire High Level Repeater** - BART Underground		Fire	EMS
FIREMARS D	<TBD>	868.9875	156.7	5A	868.9875	156.7	5A	W	H	FIREMARS Talkaround		Fire	EMS
FIREMARS2	<TBD>	866.9125	156.7	5A	821.9125	156.7	5A	W	H	Low Level Fire Repeater		Fire	EMS
FIREMARS2 D	<TBD>	866.9125	156.7	5A	866.9125	156.7	5A	W	H	FIREMARS 2 Talkaround		Fire	EMS
I-CALL	8CAL90	866.0125	156.7	5A	821.0125	156.7	5A	W	H	International Calling**	Law	Fire	EMS
I-CALL TA	8CAL90D	866.5125	156.7	5A	866.5125	156.7	5A	W	H	I-CALL Talkaround	Law	Fire	EMS
I-TAC 1	8TAC91	866.5125	156.7	5A	821.5125	156.7	5A	W	H	International Tactical 1**	Law	Fire	EMS
I-TAC 1 TA	8TAC91D	866.5125	156.7	5A	866.5125	156.7	5A	W	H	I-TAC 1 Talkaround	Law	Fire	EMS
I-TAC 2	8TAC92	867.0125	156.7	5A	822.0125	156.7	5A	W	H	International Tactical 2**	Law	Fire	EMS
I-TAC 2 TA	8TAC92D	867.0125	156.7	5A	867.0125	156.7	5A	W	H	I-TAC 2 Talkaround	Law	Fire	EMS
I-TAC 3	8TAC93	867.5125	156.7	5A	822.5125	156.7	5A	W	H	International Tactical 3**	Law	Fire	EMS
I-TAC 3 TA	8TAC93D	867.5125	156.7	5A	867.5125	156.7	5A	W	H	I-TAC 3 Talkaround	Law	Fire	EMS
I-TAC 4	8TAC94	868.0125	156.7	5A	823.0125	156.7	5A	W	H	International Tactical 4**	Law	Fire	EMS
I-TAC 4 TA	8TAC94D	868.0125	156.7	5A	868.0125	156.7	5A	W	H	I-TAC 4 Talkaround	Law	Fire	EMS

** Use of high level interoperability repeaters requires operational coordination with other users in the Bay Area

*** NOTE: CALSIEC has only approved the NCC channel names for the 800 MHz. Interoperability channels at this time.

C.1 FCC Nomenclature

The 800 MHz names were adopted by the California SIEC in March 2006. Agencies will be required to conform as part of the Master Mutual Aid agreement to use these channels. Vendors are being alerted to this requirement by the 800 MHz Transition Administrator to ensure that radios are properly programmed as part of rebanding.

Table 1. 800 MHz Nomenclature Adopted by the FCC

800 MHz Nomenclature Adopted by the FCC							
FREQUENCY (MHz) OR CHANNEL SET	BASE/MOBILE	PRIMARY SERVICE	LEGACY OES / FCC CHANNEL LABEL	B/W (kHz)	NCC PROP. CHANNEL LABEL	PART 90 FOOTNOTE	USE / NOTES
821.0125	Mobile	Any PS	ICALL	16	8CAL90	90.617(a)(1), 90.619(c)(1)	CALLING CHANNEL
821.2000	Mobile	Law	CLEMARS 21	16			NOTE 6
821.5125	Mobile	Any PS	ITAC 1	16	8TAC91	90.617(a)(1), 90.619(c)(1)	
821.9125	Mobile	FIRE / EMS	FIREMARS 2	16			NOTE 6
822.0125	Mobile	Any PS	ITAC 2	16	8TAC92	90.617(a)(1), 90.619(c)(1)	
822.5125	Mobile	Any PS	ITAC 3	16	8TAC93	90.617(a)(1), 90.619(c)(1)	
823.0125	Mobile	Any PS	ITAC 4	16	8TAC94	90.617(a)(1), 90.619(c)(1)	
823.5125	Mobile	Law	CLEMARS 9	16			
823.9875	Mobile	FIRE / EMS	FIREMARS	16			
866.0125	Base/Mobile	Any PS	ICALL	16	8CAL90D	90.617(a)(1), 90.619(c)(1)	CALLING CHANNEL
866.2000	Base/Mobile	Law	CLEMARS 20	16			NOTE 6
866.5125	Base/Mobile	Any PS	ITAC 1	16	8TAC91D	90.617(a)(1), 90.619(c)(1)	
866.9125	Base/Mobile	FIRE / EMS	FIREMARS 2D	16			NOTE 6
867.0125	Base/Mobile	Any PS	ITAC 2	16	8TAC92D	90.617(a)(1), 90.619(c)(1)	
867.5125	Base/Mobile	Any PS	ITAC 3	16	8TAC93D	90.617(a)(1), 90.619(c)(1)	
868.0125	Base/Mobile	Any PS	ITAC 4	16	8TAC94D	90.617(a)(1), 90.619(c)(1)	
868.5125	Base/Mobile	Law	CLEMARS 8	16			
868.9875	Base/Mobile	FIRE / EMS	FIREMARS D	16			

Appendix D Gateways

Table below lists the jurisdictions, agency, description of gateway, frequency, and an identification of whether the gateway is located at a fixed site or is mobile. The appendix section corresponding to each gateway is also listed.

Table 5. Index of Gateway Devices in the Oakland Urban Area

Appendix	Jurisdiction	Agency	Type	Quantity	Fixed Mobile/Portable Console
D.1	Oakland	Oakland	ACU-1000	1	Fixed
D.1	Oakland	Oakland	ACU-1000	2	Mobile
D.2	Alameda County	AlCo Sheriff	Infinimux G4	5	Mobile/Staged
D.3	Contra Costa County	CoCo Sheriff	ACU-1000	2	Fixed
D.4 – D.7	Contra Costa County	CoCo Fire	ACU-1000	5	Mobile
D.8 – D.11	Contra Costa County	CoCo Fire	ACU-1000	4	Portable

D.1 Oakland

Gateway Information

Gateway Name:	ACU-1000
Gateway Location (if mobile, enter storage location):	Two Gateways- 1. Fixed gateway at Fire Dispatch 2. Mobile gateway In Police Vehicle
Responsible Agency:	Oakland
Gateway Point of Contact:	Bob Glaze
Point of Contact Title:	Chief Technology Officer
Point of Contact Email:	bglaze@oaklandnet.com
Point of Contact Phone:	(510) 238-2930
If mobile, Service Area (Available Area for Deployment):	Oakland
Make of Gateway:	JPS
Model of Gateway:	ACU-1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Fixed and Mobile
Number of Networks:	8 each
Number of Active Ports or Radios:	15
Other Notes:	Currently, no specific agencies are preprogrammed.

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1			
2			
3			
4			
5			
6			

D.2 Alameda County

Gateway Information

Gateway Name:	Tactical Interoperable Communication Kit (TICK) 1 – 5
Gateway Location (if mobile, enter storage location):	Staged at five locations: Oakland, San Leandro, Dublin, East Bay Regional Parks District, Sunol Fire Station
Responsible Agency:	Alameda Co. Sheriff
Gateway Point of Contact:	Randy Hagar
Point of Contact Title:	Deputy Director
Point of Contact Email:	Randall.hagar@acgov.org
Point of Contact Phone:	(510) 208-9789
If mobile, Service Area (Available Area for Deployment):	All of State of California
Make of Gateway:	Infinimode
Model of Gateway:	Infinimux G4 (TICK)
Type (e.g. Fixed Site, Mobile, Console Patch):	Staged at 5 locations in transportable kits
Number of Networks:	8 minimum; scalable to 28
Number of Active Ports or Radios:	8 minimum; scalable to 28
Other Notes:	Can be Heli-lifted, transported via truck, van

Agencies Supported by Gateway

Gateway:	-		
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**Any frequency on any LMR band; currently all 5 TICKs are preprogrammed for Oakland's 17 trunked EDACs channels, Alameda County's 21 SmartNet II channels, San Mateo and Marin County's UHF T-Band channels, Hayward and Berkeley's UHF channels, and all State Interoperable Channels Plans include adding San Francisco and Sacramento trunked channels to**		**All Public Safety agencies in the greater San Francisco Bay area and many others throughout the State**

Agencies Supported by Gateway

Gateway:	-		
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
	all 5 TICKs		

Figure 2. Tactical Interoperable Communication Kit in a Vehicle

Figure 3. Tactical Interoperable Communication Kit

D.2.1 Alameda County Radio Interoperability Resource (Addendum 2)

ALAMEDA COUNTY
RADIO INTEROPERABILITY RESOURCES

OES REGION 2
XAL

November 20, 2005
510-208-9789

To report additions, corrections or revisions, call Randy Hagar Alameda County GSA

Resource	Type	Radio Bands Available	Location	POC
Communications Support Vehicles				
State OES Trailer OES		800 trunked/ Moto, VHF-low, VHF-High, UHF	Eden Station	AlCo
Sheriff Mobile Command OES	Specialty Van	800 trunked/ Moto, VHF, UHF, Ham	Eden Station	AlCo
RACES Van OES		800 trunked / Moto, VHF, UHF, Ham	OES (Dublin)	AlCo

Search & Rescue OES	4 x 4 SUVs	800 trunked, Moto, VHF	OES (Dublin)	AlCo
Incident Command Hayward Fire		800 Trunked-analog, UHF, VHF	Hayward	
Incident Command Fremont PD		800 Trunked-analog, UHF, VHF	Fremont	
Incident Command Oakland PD		800 Trunked-EDACS, VHF	Oakland	
Incident Command Livermore PD		800 Trunked-Moto, VHF	Livermore	
GSA Communications Dispatch	4x4 minivan	800 Trunked-Moto & EDACS, VHF, UHF, Satellite	AlCo Comm Shop	Sheriff

Resource	Type	Radio Bands Available	Location	POC
Portable Radios Kits				
PRK800M-A OES	Portable Radio Kit A	10 each 800 MHz Moto	AlCo OES, Dublin	AlCo
PRK800M-B OES	Portable Radio Kit B	10 each 800 MHz Moto	AlCo OES, Dublin	AlCo
PRK800M-C OES	Portable Radio Kit C	10 each 800 MHz Moto	AlCo OES, Dublin	AlCo

PRK800M-D OES	Portable Radio Kit D	10 each 800 MHz Moto	AlCo OES, Dublin	AlCo
PRK800M-E OES	Portable Radio Kit E	10 each 800 MHz Moto	AlCo OES, Dublin	AlCo

Resource	Type	Radio Bands Available	Location	POC

Portable Repeaters

VRPT-800-01 Commander Hoig	Vehicular Repeater	800 MHz SmartNet II	Sheriff Patrols	

Resource	Type	Radio Bands Available	Location	POC

Tactical/ Fixed Interoperability Units (all vox operated)

ACU-Oakland 1 ??	Fixed JPS ACU1000	800 MHz EDACS, ??	Oakland Dispatch ?	
ACU-Oakland 2 ??	ACU1000	???	??	
TICK-01 OES	Infinimux G4	800 MHz Moto & EDACS, VHF, UHF, Cell	OES, Dublin	Sheriff
TICK-02 Dispatch	Infinimux G4	800 MHz Moto & EDACS, VHF, UHF, Cell	GSA, San Leandro	Sheriff
TICK-03 OES	Infinimux G4	800 MHz Moto & EDACS, VHF, UHF, Cell	EBRPD	Sheriff

TICK-04 OES	Infinimux G4	800 MHz Moto & EDACS, VHF, UHF, Cell	Glen Dyer Jail, Oak.	Sheriff
TICK-05 OES	Infinimux G4	800 MHz Moto & EDACS, VHF, UHF, Cell	ALCO Station 14, Sunol	

Resource	Type	Radio Bands Available	Location	POC

Mutual Aid Repeaters (fixed Site)

Conventional Repeaters Comm.		800 MHz	see chart	GSA

GSA - LAKESIDE OAKLAND	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW
GRIZZLY PEAK OAKLAND	HAIL	HLFIRE	HLLAW				
HIGLAND HOSPITAL 1 OAKLAND	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW
HIGHLAND HOSPITAL 2 OAKLAND	HAIL	STTAC 1	STTAC 2	STTAC3	STTAC 4	LLFIRE	LLLAW
SAN LEANDRO HILL	HAIL	STTAC	STTAC	STTAC	STTAC	LLFIRE	LLLAW

		1	2	3	4		
SAN LEANDRO							
HAYWARD HALL OF JUSTICE HAYWARD	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW
COYOTE HILL FREMONT	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW
SUNOL RIDGE SUNOL	HAIL	HLFIRE	HLLAW				
SANTA RITA JAIL DUBLIN	HAIL	STTAC 1	STTAC 2	STTAC 3	STTAC 4	LLFIRE	LLLAW
CRANE RIDGE LIVERMORE	HAIL	HLFIRE	HLLAW				

Resource	Type	Radio Bands Available	Location	POC
Console Bridge				
ALCO SmartNet II to Oakland EDCAS console to console bridge	Dispatchers	800MHz trunked/conventional	Sheriff Dispatch and Oakland Fire / PD	

Note: Any radio that appears on any console can be patched from EDACS to SmartNet and vice-versa (VOX operated)

D.3 Contra Costa County

Gateway Information

Gateway Name:	Hilltop
Gateway Location (if mobile, enter storage location):	Kregor Peak, Highland Peak
Responsible Agency:	Contra Costa County DoIT
Gateway Point of Contact:	Steve Overacker
Point of Contact Title:	Communications Manager
Point of Contact Email:	sover@doit.cccounty.us
Point of Contact Phone:	(925) 957-7701
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Fixed Site
Number of Networks:	NA
Number of Active Ports or Radios:	5
Other Notes:	Not Yet In Service – Will be installed at sites to support VHF Lo-band, VHF Hi-band, UHF T-Band, and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	UHF		**Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies**
3	**800 Conventional**		**Richmond, BART, Oakland, Alameda County, Livermore Pleasanton**
4	**Low Band**		**CHP, East Bay Parks, Contra Costa General Government**

D.4 Contra Costa County

Gateway Information

Gateway Name:	Comm Support 131
Gateway Location (if mobile, enter storage location):	800 San Ramon Valley Blvd. Danville, CA 94526
Responsible Agency:	San Ramon Valley Fire District
Gateway Point of Contact:	Chris Suter
Point of Contact Title:	Deputy Fire Chief
Point of Contact Email:	csuter@srvfire.ca.gov
Point of Contact Phone:	(925) 838-6604
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Mobile
Number of Networks:	NA
Number of Active Ports or Radios:	12
Other Notes:	Installed in Comm Support 131 Programmable on as needed basis to accommodate VHF Lo-band, VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
3	VHF hi band (P25 or Analog)		CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies
4	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
5	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
6	800 MHz EDACS		Richmond, Oakland, BART
7	800 MHz Motorola Smartnet II		Alameda County Fire and Law, Livermore Pleasanton Fire, San Francisco Fire and OES
8	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government
9	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government

NOTE: Most Fire, Law and many public Works and Industrial systems are programmed into these high capacity radios for the bay Area counties. Programming capability exists with the ACU to add channels not provided, except in the Trunked Systems.

D.5 Contra Costa County

Gateway Information

Gateway Name:	Comm Support 267
Gateway Location (if mobile, enter storage location):	Richmond Fire Department
Responsible Agency:	City of Richmond
Gateway Point of Contact:	Jim Fajardo
Point of Contact Title:	Battalion Chief
Point of Contact Email:	James_Fajardo@ci.richmond.ca.us
Point of Contact Phone:	(510) 307-8031
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Mobile
Number of Networks:	NA
Number of Active Ports or Radios:	12
Other Notes:	Installed in Comm Support 267 Programmable on as needed basis to accommodate VHF Lo-band, VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
3	VHF hi band (P25 or Analog)		CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies
4	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
5	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
6	800 MHz EDACS		Richmond, Oakland, BART
7	800 MHz Motorola Smartnet II		Alameda County Fire and Law, Livermore Pleasanton Fire, San Francisco Fire and OES
8	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government
9	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government

NOTE: Most Fire, Law and many public Works and Industrial systems are programmed into these high capacity radios for the bay Area counties. Programming capability exists with the ACU to add channels not provided, except in the Trunked Systems.

D.6 Contra Costa County

Gateway Information

Gateway Name:	Comm Support TEC-1
Gateway Location (if mobile, enter storage location):	OES 50 Glacier Drive Martinez, CA 94553
Responsible Agency:	Contra Costa County Sheriff
Gateway Point of Contact:	Terry Betts
Point of Contact Title:	Telecommunications Manager
Point of Contact Email:	tbett@so.cccounty.us
Point of Contact Phone:	(925) 313-2453
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Mobile
Number of Networks:	NA
Number of Active Ports or Radios:	8
Other Notes:	Staged in Comm Support TEC-1 vehicle at OES. Programmable on as needed basis to accommodate VHF Lo-band, VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band**		**Contra Costa Sheriff**
2	**VHF hi band**		**Antioch PD**
3	**VHF hi band**		**Brentwood**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
4	**UHF**		**Pleasant Hill**
5	**UHF**		**Martinez**
6	**UHF**		**Concord**
7	**UHF**		**Walnut Creek**
8	**UHF**		**Pittsburg**
9	**800Mhz**		**Richmond**

D.7 Contra Costa County

Gateway Information

Gateway Name:	Comm Support 302
Gateway Location (if mobile, enter storage location):	2010 Geary Rd. Pleasant Hill, CA 94523
Responsible Agency:	Contra Costa County Fire District
Gateway Point of Contact:	Brent Finster
Point of Contact Title:	Telecommunications Manager
Point of Contact Email:	bfinster@cccfpd.org
Point of Contact Phone:	(925) 941-3550
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -1000
Type (e.g. Fixed Site, Mobile, Console Patch):	Mobile
Number of Networks:	NA
Number of Active Ports or Radios:	12
Other Notes:	Not Yet In Service Estimated by August 1, 2006 – Will be installed in Comm Support 302. Programmable on as needed basis to accommodate VHF Lo-band, VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**VHF hi band**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
3	VHF hi band (P25 or Analog)		CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies
4	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
5	UHF		Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies
6	800 MHz EDACS		Richmond, Oakland, BART
7	800 MHz Motorola Smartnet II		Alameda County Fire and Law, Livermore Pleasanton Fire, San Francisco Fire and OES
8	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government
9	VHF Low Band		CHP, East Bay Parks, Contra Costa General Government

NOTE: Most Fire, Law and many public Works and Industrial systems are programmed into these high capacity radios for the bay Area counties. Programming capability exists with the ACU to add channels not provided, except in the Trunked Systems.

D.8 Contra Costa County

Gateway Information

Gateway Name:	COML 1150
Gateway Location (if mobile, enter storage location):	2010 Geary Rd. Pleasant Hill, CA 94523
Responsible Agency:	Contra Costa County Fire District
Gateway Point of Contact:	Brent Finster
Point of Contact Title:	Telecommunications Manager
Point of Contact Email:	bfinster@cccfpd.org
Point of Contact Phone:	(925) 941-3550
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -Tac
Type (e.g. Fixed Site, Mobile, Console Patch):	Portable
Number of Networks:	NA
Number of Active Ports or Radios:	5
Other Notes:	Stored in Telecommunications Manager's vehicle used for rapidly deployable interoperability using portable radios. Programmable on as needed basis to accommodate VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band (P25 or Analog)**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**UHF (federal government)**		**NIFC Logistics frequencies and non-**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
			encrypted FEMA US&R
3	**UHF**		**Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies**
4	**800 MHz. Conventional**		**Interoperability Channels**
5	**Nextel**		**Support and administrative personnel from public safety agencies**

Note: ACU-Tac is configured to use Bendix-King portable radios in VHF Highband, UHF (federal government), UHF, and 800 MHz. Bands as well as Nextel Direct Connect. Cables are included for other popular public safety portable radios (Motorola, M-A/Com, etc.)

D.9 Contra Costa County

Gateway Information

Gateway Name:	COML 1153
Gateway Location (if mobile, enter storage location):	2010 Geary Rd. Pleasant Hill, CA 94523
Responsible Agency:	Contra Costa County Fire District
Gateway Point of Contact:	Kody Kerwin
Point of Contact Title:	Telecommunications Specialist
Point of Contact Email:	kkerw@cccfpd.org
Point of Contact Phone:	(925) 941-3553
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU –Tac
Type (e.g. Fixed Site, Mobile, Console Patch):	Portable
Number of Networks:	NA
Number of Active Ports or Radios:	5
Other Notes:	Stored in Telecommunications Specialist's vehicle used for rapidly deployable interoperability using portable radios. Programmable on as needed basis to accommodate VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band (P25 or Analog)**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**UHF (federal government)**		**NIFC Logistics frequencies and non-**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
			encrypted FEMA US&R
3	**UHF**		**Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies**
4	**800 MHz. Conventional**		**Interoperability Channels**
5	**Nextel**		**Support and administrative personnel from public safety agencies**

Note: ACU-Tac is configured to use Bendix-King portable radios in VHF Highband, UHF (federal government), UHF, and 800 MHz. Bands as well as Nextel Direct Connect. Cables are included for other popular public safety portable radios (Motorola, M-A/Com, etc.)

D.10 Contra Costa County

Gateway Information

Gateway Name:	COML 3101
Gateway Location (if mobile, enter storage location):	1500 Bollinger Canyon Road San Ramon, CA 94583
Responsible Agency:	San Ramon Valley Fire District
Gateway Point of Contact:	Chris Suter
Point of Contact Title:	Deputy Fire Chief
Point of Contact Email:	csuter@srvfire.ca.gov
Point of Contact Phone:	(925) 838-6604
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -Tac
Type (e.g. Fixed Site, Mobile, Console Patch):	Portable
Number of Networks:	NA
Number of Active Ports or Radios:	5
Other Notes:	Stored in Deputy Chief's vehicle used for rapidly deployable interoperability using portable radios. Programmable on as needed basis to accommodate VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band (P25 or Analog)**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**UHF (federal government)**		**NIFC Logistics frequencies and non-encrypted FEMA US&R**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
3	**UHF**		**Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies**
4	**800 MHz. Conventional**		**Interoperability Channels**
5	**Nextel**		**Support and administrative personnel from public safety agencies**

Note: ACU-Tac is configured to use Bendix-King portable radios in VHF Highband, UHF (federal government), UHF, and 800 MHz. Bands as well as Nextel Direct Connect. Cables are included for other popular public safety portable radios (Motorola, M-A/Com, etc.)

D.11 Contra Costa County

Gateway Information

Gateway Name:	COML 5113
Gateway Location (if mobile, enter storage location):	East Contra Costa Fire District
Responsible Agency:	East Contra Costa Fire District
Gateway Point of Contact:	Hugh Henderson
Point of Contact Title:	Battalion Chief
Point of Contact Email:	
Point of Contact Phone:	(925) 240-2131
If mobile, Service Area (Available Area for Deployment):	Contra Costa County and Region
Make of Gateway:	JPS
Model of Gateway:	ACU -Tac
Type (e.g. Fixed Site, Mobile, Console Patch):	Portable
Number of Networks:	NA
Number of Active Ports or Radios:	5
Other Notes:	Stored in Battalion Chief's vehicle used for rapidly deployable interoperability using portable radios. Programmable on as needed basis to accommodate VHF Hi-band, UHF and 800 MHz

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
1	**VHF hi band (P25 or Analog)**		**CCSO, Contra Costa Fire agencies (All), Antioch PD. Berkeley Fire, Solano Fire, many other VHF agencies**
2	**UHF (federal government)**		**NIFC Logistics frequencies and non-**

Agencies Supported by Gateway

Gateway:			
Item	**Frequency (Tx/Rx) or System/Talk Group**	**Name or Designation**	**Agency or Agencies using this Frequency or Talk Group**
			encrypted FEMA US&R
3	**UHF**		**Pleasant Hill, Walnut Creek, Pittsburg, Martinez, Concord PD, SRV fire UHF system, Hayward Fire, Berkeley PD, many other agencies**
4	**800 MHz. Conventional**		**Interoperability Channels**
5	**Nextel**		**Support and administrative personnel from public safety agencies**

Note: ACU-Tac is configured to use Bendix-King portable radios in VHF Highband, UHF (federal government), UHF, and 800 MHz. Bands as well as Nextel Direct Connect. Cables are included for other popular public safety portable radios (Motorola, M-A/Com, etc.)

Appendix E Shared Systems

Detailed information on all shared systems available for use within the region is listed in subsequent pages of Appendix E.

Table below lists the jurisdictions, name, system, and type of shared systems in the Urban Area. The appendix section corresponding to each gateway is also listed.

Table 6. Index of Shared Systems in the Urban Area

App	Name	Service Area	Radio System
E.1	Oakland 800 MHz	City of Oakland	EDACS
E.2	ALCO 800 MHz	Alameda County	Motorola SmartNet II
E.3	Contra Costa County Fire	Contra Costa County	Conventional
E.4	Contra Costa County Sheriff	Contra Costa County	Conventional
E.5	Livermore/Pleasanton	Livermore/Pleasanton	Motorola SmartNet II
E.6	Richmond	Western Contra Costa County	EDACS
E.7	UC Berkeley	UC Berkeley Campus	Motorola

E.1 Oakland

Shared System Information

Name:		*Oakland 800 trunked system*
System Type:	**Make:**	M/A-Com
	Model:	EDACS
	Band:	800 MHz
	Trunked or Conventional:	Trunked
Responsible Agency:		Oakland
System POC:	**Name:**	Bob Glaze
	Title:	Chief Technology Officer
	Email:	rglaze@oaklandnet.com
	Phone:	(510) 238-2930
Service Area (County and/or City(ies)):		City of Oakland
Supported Public Safety Agencies:		City of Oakland Police, Fire, and Public Works, Piedmont Police and Fire Departments, Emeryville Police , Emeryville Fire, Berkeley Police, Port of Oakland, Oakland Housing Authority, County of Alameda Sheriffs Transit and Peralta, California Highway Patrol, Alameda County Probation, American medical Response, City of Alameda Police and Fire, Airside Operations Oakland International Airport, Oakland Public Schools

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported
Patrol 1-5xx	WPUQ545	See above Police Agencies
Oak 1-9	WPUQ545	See above Fire Agencies
154.920	CLEMARS	Any VHF agency with this Frequency
154.280	WHITE FIRE	Any VHF Agency with this Frequency
154.070	ALCO-T4	Any VHF Agency with this Frequency
TAC 1-5	WPUQ545	See above Police Agencies
821/866.0125	Hail	City of Oakland/Alameda County
821/866.5125	State Tac 1	“
822/867.0125	State Tac 2	“
822/867.5125	State Tac 3	"
823/868.0125	State Tac 4	“
823/868.5125	HL Law	“
823/868.9875	HL Fire	“
821/866.200	LL Law	“
821/866.9125	LL Fire	“
822/867.7875	LG Tac	“

E.2 Alameda County

Shared System Information

Name:		*Alameda County800 MHz Trunked Radio System*
System Type:	**Make:**	Motorola
	Model:	Smartnet II
	Band:	800 MHz
	Trunked or Conventional:	Trunked, simulcast
Responsible Agency:		Alameda County GSA
System POC:	**Name:**	Randy Hagar
	Title:	Deputy Director
	Email:	Randall.hagar@acgov.org
	Phone:	(510) 208-9789
Service Area (County and/or City(ies)):		Alameda County
Supported Public Safety Agencies:		Alameda County: Sheriff, Fire, Public Works, General Services, Health Care, Zone 7 Water District, Probation, District Attorney. Cities: Fremont, Union City, Newark, Alameda, San Leandro, Dublin. Other Agencies: Lawrence Livermore National Laboratory Consolidated Fire Dispatch, Cal State East Bay, AMR. Other agencies that have Alameda County trunked mobile radios for mutual aid: City of Hayward, City of Oakland Fire Dept., CHP, A/C Transit, cities of Livermore and Pleasanton

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported
T1 821.1500 **866.1500**	21 channels used for Alameda County's trunked radio system	See list above.
T2 821.4250 **866.4250**	See attached document:	
T3 821.8000 **866.8000**	**"ALAMEDA CO**	
T4 821.9375 **866.9375**	**CHANNELS"**	
T5 822.1500 **867.1500**		
T6 822.2500 **867.2500**		
T7 822.4000 **867.4000**		
T8 822.6750 **867.6750**		
T9 822.7750 **867.7750**		
T10 822.9250 **867.9250**		
T11 823.0375 **868.0375**		
T12 823.0875 **868.0875**		
T13 823.2000 **868.2000**		

T14 823.2250 **868.2250**		
T15 823.2750 **868.2750**		
T16 823.3625 **868.3625**		
T17 823.4375 **868.4375**		
T18 823.6500 **868.6500**		
T19 823.7125 **868.7125**		
T20 823.7625 **868.7625**		
T21 823.9250 **868.9250**		

E.3 Contra Costa County - Sheriff

Shared System Information

Name:		*Contra Costa Sheriff*
System Type	**Make:**	Motorola
	Model:	MTR2000
	Band:	VHF High band
	Trunked or Conventional:	Conventional
Responsible Agency:		Contra Costa Sheriff
System POC:	**Name:**	Terry Betts
	Title:	Communication Systems Manager
	Email:	tbett@so.cccounty.us
	Phone:	925-313-2453
Service Area (County and/or City(ies)):		Contra Costa County
Supported Public Safety Agencies:		San Ramon Danville Lafayette Moraga Orinda Oakley Sheriff's Office Rio Vista (Solano County) AC Transit

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported
155.310/155.625	SO West	Sheriff's Office, AC Transit, Lafayette, Orinda, Moraga
155.250/155.955	SO Central	Sheriff's Office, Danville, San Ramon
155.190/155.640	SO East	Sheriff's Office, Oakley, Rio Vista
460.100/460.100	County Common	Pittsburg, Martinez, Concord, Walnut Creek, Pleasant Hill
155.400/155.400	Tac 4	Antioch, Brentwood

E.4 Contra Costa County - Fire

Shared System Information

Name:		*Contra Costa Regional Fire Communications Center & San Ramon Valley Fire District*
System Type:	**Make:**	Contra Costa: Infrastructure-Motorola MTR2000 repeaters San Ramon: Infrastructure-Motorola Quantar repeaters
	Model:	Contra Costa: Mobiles-Mostly Motorola MCS2000 San Ramon: Mobiles-Kenwood TK 790/890 model VHF/UHF, CDF firmware, 256 channels All Portables: Motorola HT2000, XTS5000, HT1250, Bendix King DPH
	Band:	VHF
	Trunked or Conventional:	Conventional
Responsible Agency:		Contra Costa County Fire & San Ramon Valley Fire
System POC:	**Name:**	Brent Finster / Chris Suter
	Title:	Telecommunications Manager / Deputy Chief
	Email:	bfinster@cccfpd.org / csuter@srvfire.ca.gov
	Phone	(925) 941-3550 / (925) 838-6604
Service Area (County and/or City(ies)):		Contra Costa County (including all cities)
Supported Public Safety Agencies:		Contra Costa County Fire San Ramon Valley Fire East Contra Costa Fire Moraga-Orinda Fire Rodeo-Hercules Fire Pinole Fire Crockett-Carquinez Fire El Cerrito Fire (partial)

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported
154.280/154.280	WHITE 1	ALL
154.265/154.265	WHITE 2	ALL
154.295/154.295	WHITE 3	ALL
156.075/156.075	CALCORD	ALL
155.7525/155.7525 156.7Hz. Narrowband	V-CALL	ALL
151.1375/151.1375 156.7Hz. Narrowband	V-TAC 1	ALL

154.4525/154.4525 156.7Hz. Narrowband	V-TAC 2	ALL
158.7375/158.7375 156.7Hz. Narrowband	V-TAC 3	ALL
159.4725/159.4725 156.7Hz. Narrowband	V-TAC 4	ALL

E.5 Livermore/Pleasanton

Shared System Information

Name:		*Livermore 800 MHz Trunked Radio System*
System Type:	**Make:**	Motorola
	Model:	SmartNet II
	Band:	800 MHz
	Trunked or Conventional:	Trunked
Responsible Agency:		Livermore Police Department
System POC:	**Name:**	Rhonda Bishop
	Title:	Police Facility and Equipment Manager
	Email:	rbishop@ci.livermore.ca.us
	Phone:	(925) 371-4921
Service Area (County and/or City(ies)):		Cities of Livermore and Pleasanton
Supported Public Safety Agencies:		Livermore: Police, Fire, Public Works, Parks & Recreation District Pleasanton: Police, Fire, Para-Transit

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported
866.0125	Hail	All Agencies in County
866.5125	State Tac 1	"
867.0125	State Tac 2	"
867.5125	State Tac 3	"
868.0125	State Tac 4	"
868.5125	High Level Law	"
868.9875	High Level Fire	"
866.2000	Low Level Law	"
866.9125	Low Level Law	"
LPD		LPD, PLPD, LPFD
PLPD		"
LPFD		"
DUBLIN PD		LPD, PLPD, ALCO SHERIFF
CONTROL		ALCO FD
TAC 5		ALCO FD

E.6 Richmond

Shared System Information

Name:		
System Type:	**Make:**	
	Model:	
	Band:	
	Trunked or Conventional:	
Responsible Agency:		
System POC:	**Name:**	
	Title:	
	Email:	
	Phone:	
Service Area (County and/or City(ies)):		
Supported Public Safety Agencies:		INFORMATION NOT PROVIDED

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported

E.7 UC Berkeley

Shared System Information

Name:		*University of California, Berkeley*
System Type:	**Make:**	Motorola
	Model:	StartSIte
	Band:	800
	Trunked or Conventional:	Trunked
Responsible Agency:		IST:CNS, University of California, Berkeley
System POC:	**Name:**	Carl Woo
	Title:	ECP Coordinator
	Email:	cwoo@berkeley.edu
	Phone:	510/642-8097
Service Area (County and/or City(ies)):		University of California, Berkeley Campus and surrounding areas
Supported Public Safety Agencies:		UC Berkeley Police

Frequencies or Talk Groups Established for Interoperability

Shared Frequency (Tx/Rx) or Talk Group	Name or Designation	Agencies Supported

Appendix F Certified Communications Unit Leaders

This list will be updated once the NIMS/ICS standards are determined and Communication Unit Leaders are trained and certified in accordance with those standards.

The names and contact information listed below are certified by National Wildfire Coordinating Group as Communications Unit Leaders. According to NWCG standard 310-1, "certification" means meeting the pre-requisites (qualification as an Incident Communications Center Manager and Incident Communications Technician) and satisfactorily completing the COML training course. Qualification means receiving experience as a COML Trainee and satisfactorily completing a Position Task Book for the position of COML.

Table 7. Communications Unit Leaders (as certified by the National Wildfire Coordinating Group)

County	Agency	Contact	Qualification	Phone
Alameda	Lawrence-Livermore Lab Fire	Berdan, Chuck	NWCG – Trainee Only	(925) 423-1803
Contra Costa	Richmond Fire	Bonilla, Salvador	NWCG – Qualified	(707) 580-6144
Contra Costa	Contra Costa County Fire	Finster, Brent	NWCG – Qualified	(925) 941-3550
Contra Costa	East Contra Costa Fire	Henderson, Hugh	NWCG – Trainee Only	(925) 260-7503
Contra Costa	Contra Costa County Fire	Kerwin, Kody	NWCG – Qualified	(925) 941-3553
Contra Costa	Contra Costa County Fire	Stabler, Don	NWCG – Qualified	(925) 941-3330
Contra Costa	San Ramon Valley Fire	Suter, Chris	NWCG – Trainee Only	(925) 838-6604
Contra Costa	Moraga-Orinda Fire	Williams, Bob	NWCG – Trainee Only	(925) 258-4552

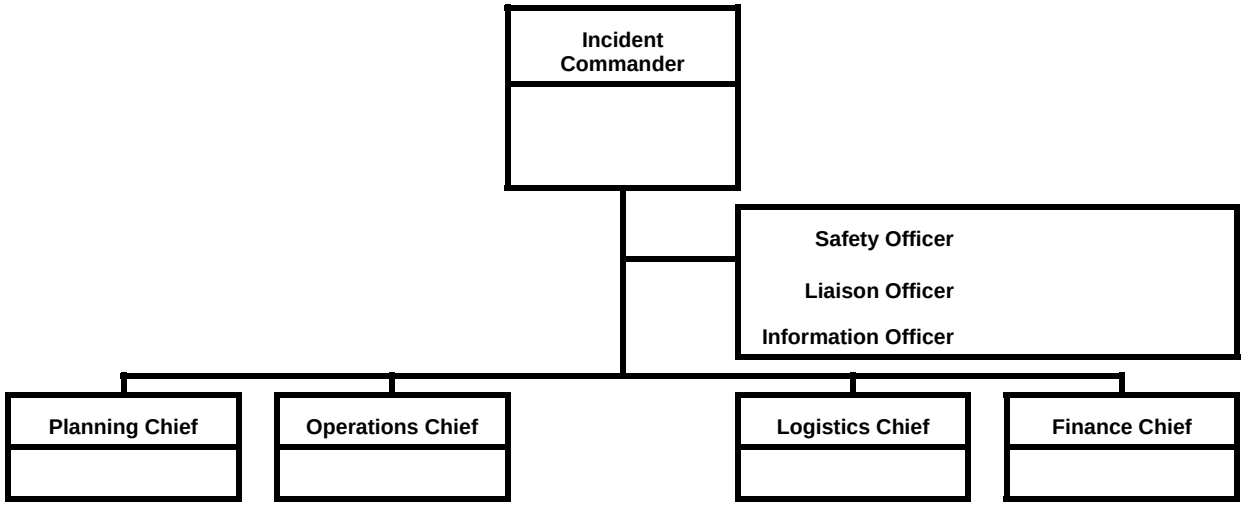
Appendix G Incident Command System Planning

Table 8. ICS 201

INCIDENT BRIEFING	1. Incident Name	2. Date	3. Time

4. Map Sketch

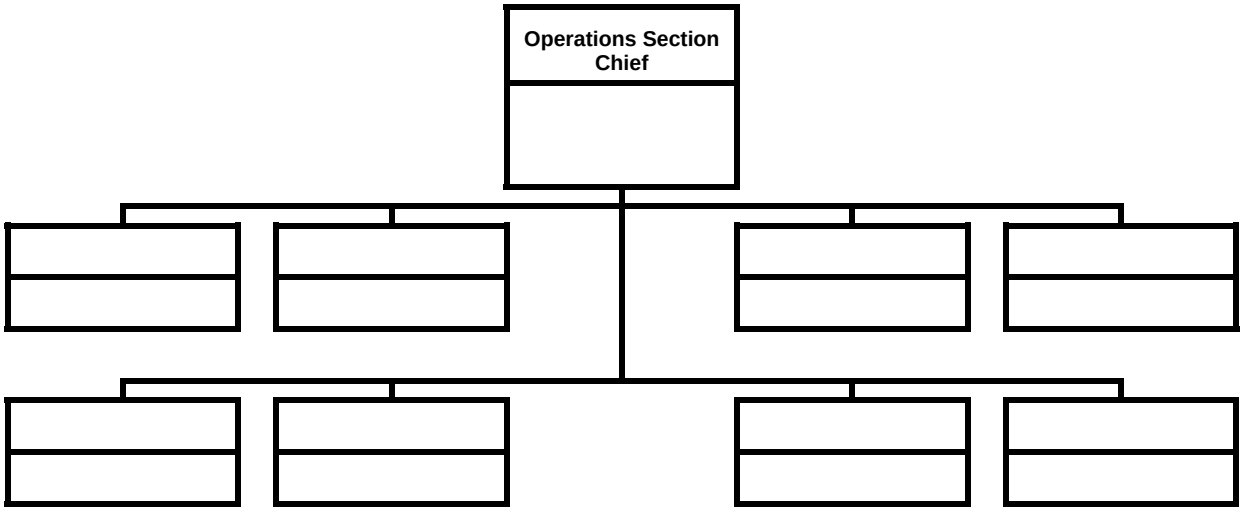
5. Current Organization



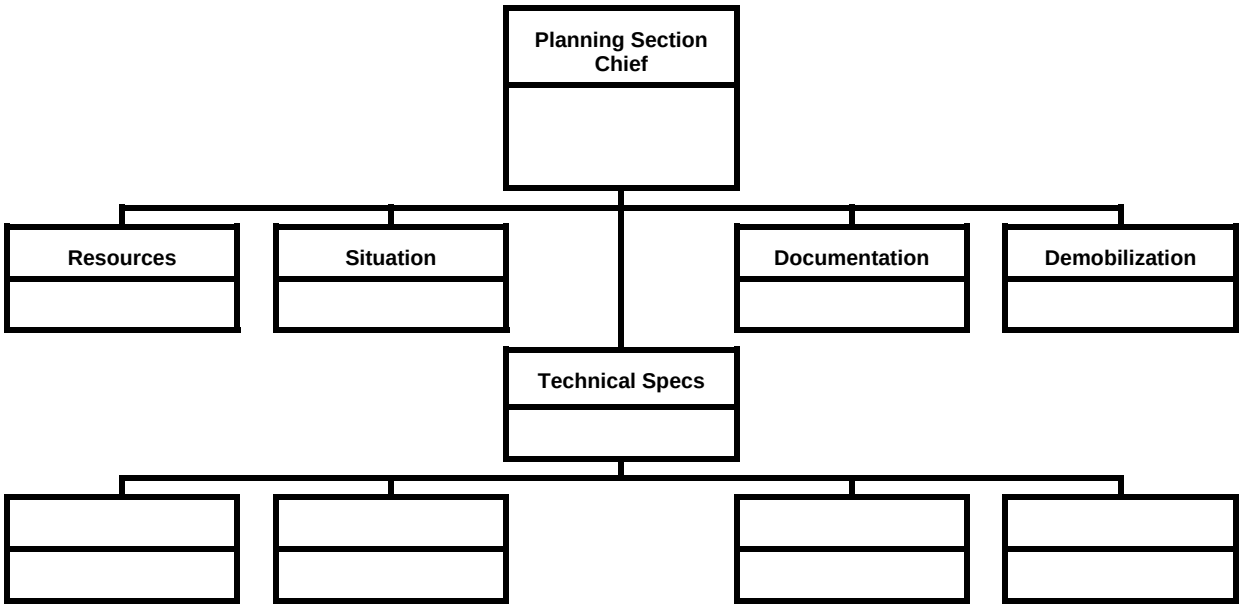
See pages 2 & 3 for Planning, Operations, Logistics, and Finance Detail

Page 1 of 4	6. Prepared by (Name and Position)

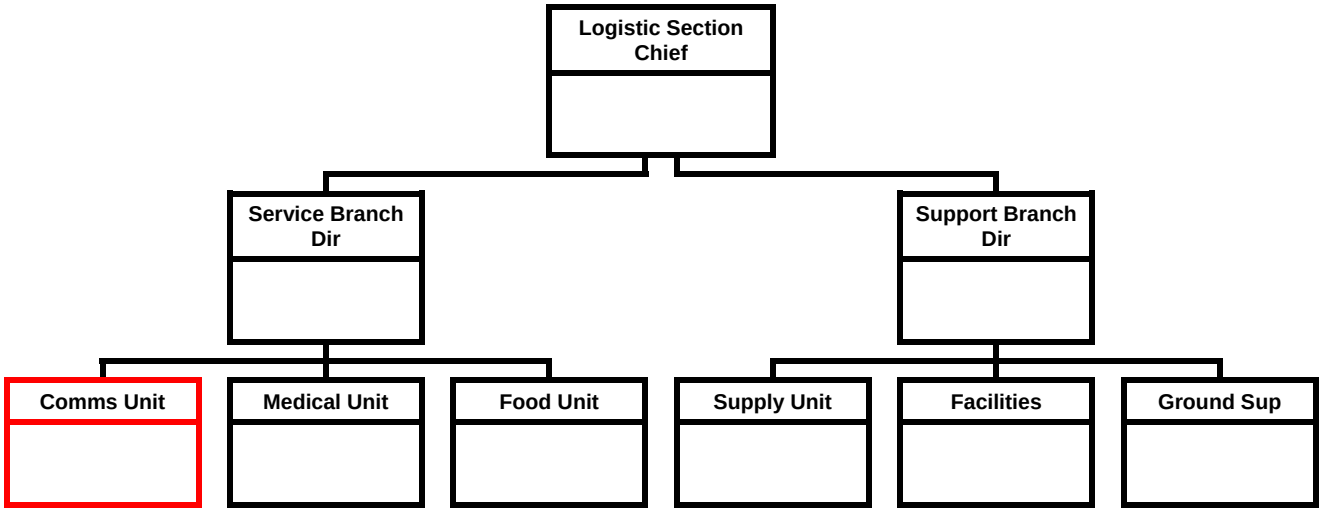
5.1 Operations



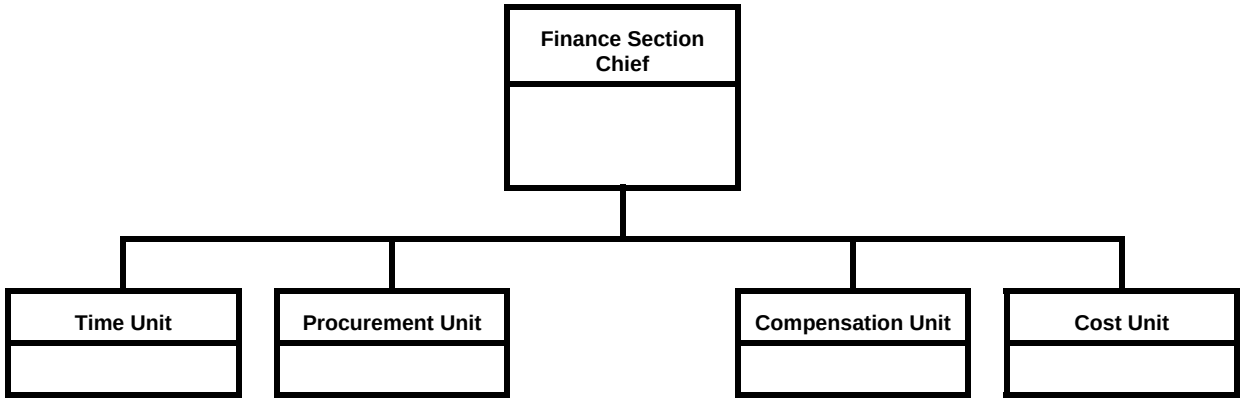
5.2 Planning



5.3 Logistics



5.4 Finance



6. Resources Summary			
Resources Ordered	Resource Identification	ETA On Scene	Location/Assignment

7. Summary of Current Actions

Table 9. ICS 203

ORGANIZATION ASSIGNMENT LIST

1. Incident Name	
2. Date	3. Time
4. Operational Period	
Position	Name
5. Incident Commander and Staff	
Incident Commander	
Deputy	
Safety Officer	
Information Officer	
Liaison Officer	
6. Agency Representative	
Agency	Name
7. Planning Section	
Chief	
Deputy	
Resources Unit	
Situation Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	
Human Resources	
Training	

8. Logistics Section	
Chief	
Deputy	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Communications Unit	
Medical Unit	
Security Unit	
Food Unit	

9. Operations Section		
Chief		
Deputy		
a. Branch I - Division/Groups		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
b. Branch II - Division/Groups		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
c. Branch III - Division/Groups		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
d. Air Operations Branch		
Air Operations Branch Director		
Air Attack Supervisor		
Air Support Supervisor		
Helicopter Coordinator		
Air Tanker Coordinator		

10. Finance Section	
Chief	
Deputy	

Time Unit	
Procurement Unit	
Compensation/Claims Unit	
Cost Unit	
Prepared by (Resource Unit Leader)	

Table 10. ICS 204

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group
3. Incident Name	4. Operational Period Date: Time:	

5. Operations Personnel			
Operations Chief		Division/Group Supervisor	
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time

7. Control Operations

8. Special Instructions

9. Division/Group Communication Summary

Function	Frequency	System	Channel	Function	Frequency	System	Channel
Command		King NIFC		Logistics		King NIFC	
Tactical Div/Group		King NIFC		Air to Ground		King NIFC	

Prepared by (Resource Unit Leader)	Approved by (Planning Section Chief)	Date	Time

Table 21. ICS 205

INCIDENT RADIO COMMUNICATIONS PLAN	1. Incident Name	2. Date/Time Prepared	3. Operational Period Date/Time

4. Basic Radio Channel Utilization					
Radio Type/Cache	Channel	Function	Frequency/Tone	Assignment	Remarks
5. Prepared by (Communications Unit)					

Table 12. ICS 211

INCIDENT CHECK-IN LIST	1. Incident Name	2. Check-In Location (complete all that apply)					3. Date/Time
Check one: ☐ Personnel ☐ Handcrew ☐ Misc. ☐ Engines ☐ Dozers ☐ Helicopters ☐ Aircraft		☐ Base	☐ Camp	☐ Staging Area	☐ ICP Restat	☐ Helibase	

Check-In Information

4. List Personnel (overhead) by Agency & Name -OR- List equipment by the following format: Agency	Single	Kind	Type	I.D. No/Name	5. Order/Request Number	6. Date/ Time Check-In	7. Leader's Name	8. Total No. Personnel	9. Manifest Yes	9. Manifest No	10. Crew or Individual's Weight	11. Home Base	12. Departure Point	13. Method of Travel	14. Incident Assignment	15. Other Qualifications	16. Sent to RESTAT Time/Int

Page 1 of 1	17. Prepared by (Name and Position) *Use back for remarks or comments*

Table 13. ICS 216

RADIO REQUIREMENTS WORKSHEET			1. Incident Name			2. Date			3. Time		
4. Branch			5. Agency			6. Operational Period			7. Tactical Frequency		
8. Division/Group			Division/Group			Division/Group			Division/Group		
Agency			Agency			Agency			Agency		
9. Agency	ID No.	Radio Requirements	Agency	ID No.	Radio Requirements	Agency	ID No.	Radio Requirements	Agency	ID No.	Radio Requirements
Page 1 of 1			10. Prepared by (Name and Position)								