INTEROP

GENERAL PUBLIC SAFETY INTEROPERABILITY RADIO SYSTEMS

Operations Response Division
Telecommunications Branch
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California Governor's Office of Emergency Services

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OVERVIEW

The Multi-Discipline Radio Systems are outlined in publications such as the National Interoperability Field Operations Guide (NIFOG) and is provided and managed by the California Governor's Office of Emergency Services (Cal OES). Those channels enhance the ability of multiple discipline agencies to communicate on common frequencies during emergencies and other special operations.

This plan governs the 35 channels in each of the public safety radio bands and the Non-Federal Mutual Aid Channels listed in the NIFOG which is considered part of the mutual aid pool of frequencies in California. As such, all these channels provide a communications option for all government and NGO officials regardless of the band their equipment operates in or the jurisdiction with which they are communicating. Other discipline-specific systems such as the California Law Enforcement Radio System (CLERS), California Law Enforcement Mutual-Aid Radio Systems (CALAW), and the California Fire Mutual-Aid Radio Systems (CAFIRE) are outlined in separate documents. SAR Command Interoperability are located in the California SARMARS Plan. The Federal Interoperability Channels are not included in this plan.

In the late 1980's the FCC mandated that States adopt a regional or county approach for 800 MHz planning. Consequently those channels were governed by their respective regional 800 MHz Communications Plans. The Statewide Interoperability Executive Committee (SIEC) Process replaced and updated those 800 MHz Plans and they are now folded into this Interoperability (INTEROP) Plan. All INTEROP channels (including those listed in the NIFOG) are bound by California's statewide standards and procedures as detailed in this plan.

Cal OES enforces strict adherence to this plan and violations can result in loss of authorization to use the Interoperability channels.

SYSTEM MANAGEMENT

The ultimate authority for operations on these Interoperability (INTEROP) frequencies and other related channels rests with the FCC. Under their rules for the Public Safety Radio Services, use of these frequencies is subject to coordination and regulation.

The State of California holds all licenses for use of these channels in California except where authorized for individual government stations. As such, the State is responsible for assuring proper utilization and operation and may revoke authority for use.

Cal OES manages and provides oversight on all Interoperability channels on behalf of the State of California and advises the Planning Areas of the California Statewide Interoperability Executive Committee (CalSIEC) on the development and supervision of these channels.

Within Cal OES, the responsibility for managing these Interoperability channels is coordinated by the Cal OES Telecommunications Branch (TCOMM) within the Operations Response Division. Cal OES TCOMM establishes and enforces procedures for participation in, and use of, the system. Cal OES Regional Communications Coordinators ensure that the system's frequencies are used properly and in a coordinated manner. The Cal OES TCOMM is also responsible for technical standards and procedures. The Telecommunications Branch Coordinators assist and advise on technical matters.

Police Chiefs, Sheriffs and all Local, State and Federal Fire Officials are responsible for ensuring that applications, licensing and operations on all these INTEROP frequencies comply with the regulations and policies set forth in this document within their agency. All Regional Coordinators (Law, Fire, TComm, Emergency Services) are responsible for the compliance of system operations within each Mutual Aid Region.

ELIGIBILITY

All government entities, and most non-government organizations (NGO), are authorized and designated by such entities are eligible to participate in this plan.

Agencies that have signed the California Master Mutual Aid Agreement to support the state's Interoperability Programs during emergencies, and are capable of rendering mutual aid are also eligible to participate using all Interoperability Multi-Discipline Channels.

AUTHORIZATION PROCEDURES FOR STATE DESIGNATED AND NON-FEDERAL NATIONAL INTEROPERABILITY CHANNELS

The State of California is the designated authorized licensee of all state designated mutual-aid and non-Federal National Interoperability (INTEROP) Channels. In order to operate on these frequencies, the licensee (*State of California*) must designate you as a unit of their system, in accordance with FCC rule 90.421. Agencies that desire to program these channels must request authorization from the Cal OES Public Safety Communications Division (PSC). [1]In cases where use is necessary for the imminent protection of human life and property, authority to transmit is automatic and will be temporary until the emergency has ended.

The following procedures are divided into two general uses: Mobiles Only and Fixed Sites. "Mobiles Only" refers to agencies requesting to program only handheld and/or vehicular mounted radios. Procedures listed under "Fixed Sites" are for agencies seeking to operate/modify radio fixed stations including radio relays or repeaters.

STATE FREQUENCY COORDINATION AND LICENSING

The Cal OES PSC Branch is responsible for ensuring all state communication systems and licenses comply with federal regulations. This includes ensuring license requests to program Interoperability channels comply with the technical and operational policies of the Planning Areas of CalSIEC.

A license request to operate a fixed radio site using mutual-aid and/or interoperability frequencies must be accompanied with an endorsement from the affected Planning Area of CalSIEC. Once obtained, the state license will be modified to include you as an authorized licensee.

Licensing Fees

Charges are levied on all applicant organizations when seeking a new frequency or making a license change, system modification, or any other technical change which requires an official FCC license modification or transaction to take place.

The Cal OES PSC frequency coordination, engineering and/or application process contract charges may apply, per frequency, per location.

For more details on the fee structure and process, please visit the Cal OES PSC website or contact the Frequency Coordination and Licensing Unit at (916) 657-6153.

http://www.caloes.ca.gov/Cal-OES-Divisions/Public-Safety-Communications

[1] *Safety of Life* provision under FCC rules 90.417(a)

MOBILES AND PORTABLES

All channels listed in Appendix C are covered by a "blanket authorization" from the FCC – "Public safety licensees…can operate mobile units on these interoperability channels without an individual license." {See FCC 00-348, Paragraph 90;FCC rules 90.421(a)(3) and 90.525(a); FCC 87-112, Paragraph 34.}

Some of the INTEROP channels already have a California statewide assigned call sign for mobiles and portables. Additionally a statewide license is used for all portable/tactical repeaters.

1	**Draft a "Letter of Intent" (LOI) on your agency letterhead** *The letter should contain general information on the requested channels, proposed site(s) and area of operations. If the system is to serve more than a single political entity, provide additional details such as a list of all individuals responsible for the project.*
2	**Complete the State of California Radio Frequency Usage Form (TDe-400)** *This form is required by Cal OES PSC and requires the requesting agency to provide technical details.*
3	**Sign Memorandum of Understanding (MOU)** *State designate mutual-aid plans require requesting agencies to sign associated MOU. Non-federal National Interoperability Channels only require a TDe-400.*
4	**Send the LOI and completed form(s) via postal mail or email to:** California Governor's Office of Emergency Services Attn: Telecommunications Branch 3650 Schriever Avenue Mather, CA 95655 Email: tdo@caloes.ca.gov
5	**Program Radios** You may program channels into radios but may not transmit until final FCC authorization is received. **Contact the Cal OES PSC FCC Unit at (916) 657-6153 for a status on FCC authorization.**

FIXED SITES

State designated Interoperability frequencies are a limited resource that is shared across the state. Therefore, fixed sites that transmit on these frequencies have the potential to cause harmful interference if not properly coordinated.

Agencies seeking to program and transmit from fixed sites will need to coordinated and receive support of neighboring jurisdictions. Furthermore, the applicant will need an endorsement from the CalSIEC before the PSC files the license request with the FCC. Requests that diverge from National or Statewide policy on the proper use of Interoperable frequencies will not be endorsed.

PSC licensing fees may apply to these requests. Contact the PSC frequency coordination and FCC licensing unit **(916) 657-6153** to determine the associated costs.

NOTE: The VHF INTEROP channels listed Appendix C are authorized for deployable, tactical, portable repeaters only (FCC Station Class FB2T). Permanent fixed repeater sites are ***NOT AUTHORIZED*** for these channels.

1	**Draft a Letter of Intent (LOI) on your agency letterhead** The letter should contain general information on the requested channels, proposed site(s) and area of operations. If the system is to serve more than a single political entity, provide additional details such as a list of all individuals responsible for the project.
2	**Fill out a FCC 601 license request form and attachments D and H** The full text of the 601 and additional required schedules may be downloaded from the CalSIEC website at http://www.caloes.ca.gov/Cal-OES-Divisions/Public-Safety-Communications or directly from the FCC at http://www.fcc.gov/formpage.html . We strongly suggest you review the entire form 601 and schedules D and H before filling out the forms in the application package.
3	**Send the LOI and completed form(s) via postal mail or email to:** California Governor's Office of Emergency Services Attn: Telecommunications Branch 3650 Schriever Avenue Mather, CA 95655 Email: tdo@caloes.ca.gov
4	**Develop a proposal package** The proposal package should include coverage plots, applicable frequencies and channels, and other supporting documents. Supporting documents include Standard Operating Procedures, letters of recommendations or endorsements from neighboring jurisdictions, and/or concurrence from regional frequency coordination groups. The CalOES Telecommunications Branch is available to assist with the coordination process.

5	**Submit proposal package for CalSIEC Planning Area review** Proposal packages must be reviewed by a CalSIEC Planning Area prior to CalSIEC endorsement. Each Planning Area governance body meets on a quarterly basis. It is recommended that you contact the Planning Area chair and arrange to have your proposal package reviewed by the committee. System proposals must be in compliance with State and Federal guidelines for Mutual-Aid and Interoperability (INTEROP) Channels.

(table below lists the counties in each Planning Area)

Northern Planning Area	***Capital/Bay Planning Area***	***Central Planning Area***	***Southern Planning Area***
Butte	Amador	Fresno	Kern*
Colusa	Alameda	Kern*	Imperial
Del Norte	Alpine	Kings	Inyo
Glenn	Calaveras	Madera	Los Angeles
Humboldt	Contra Costa	Mariposa	Mono
Lake	El Dorado	Merced	Orange
Lassen	Marin	Tulare	Riverside
Mendocino	Monterey		San Bernardino
Modoc	Napa		San Diego
Nevada	Placer		San Luis Obispo
Plumas	Sacramento		Santa Barbara
Shasta	San Benito		Ventura
Sierra	San Francisco		
Siskiyou	San Joaquin		
Sutter	San Mateo		
Tehama	Santa Clara		
Trinity	Santa Cruz		
Yuba	Solano		
	Sonoma		
	Stanislaus		
	Tuolumne		
	Yolo		

**Because it encompasses both sides of the mountain range that separates the Central Valley and Southern California, Kern participates in both Central and Southern Planning Areas.*

Contact the Cal OES Telecommunications Branch for assistance with contacting the CalSIEC Planning Areas. More information can also be found on the CalSIEC website at http://www.caloes.ca.gov/Cal-OES-Divisions/Public-Safety-Communications.

6	**Forward the CalSIEC Planning Area endorsement letter to the California Governor's Office of Emergency Services, Telecommunications Branch.**
7	**CalSIEC Formal Review** Following the CalSIEC Planning Area endorsement, the Cal OES Telecommunications Branch will forward the package to the CalSIEC Standing committees for review. Following the review, the application will go to the CalSIEC for final endorsement. The CalSIEC endorsement letter will be forwarded to the PSC FCC unit for administrative processing.
8	**Program Radios/Equipment** Requestors may program channels into radios but may not transmit until final FCC authorization is received. Contact the PSC FCC Unit at (916) 657-6153 for a status on FCC authorization.

OPERATIONAL STANDARDS

PERMISSIBLE COMMUNICATIONS

INTEROPERABILITY frequencies are for official use only.

All communications on the INTEROP frequencies as listed in the NIFOG are in accordance with Part 90, Subpart B of FCC Regulations (Public Safety Radio Pool). Participants transmit communications essential to official Law, Fire and/or Emergency Services activities of the licensee. Unofficial communications on these frequencies are prohibited and can result in revocation of licensee authorizations. These channel are an open party line, only one user in a given area can use the channel at any one time.

CHANNEL IDENTIFIERS

Only the Standard California or NPSTC Channel Identifiers are used for these INTEROP frequencies, i.e. VTAC33 is referred to as "VTAC33" only.[2] It is strictly prohibited to assign a local identifier to any Interoperability channel.

[2] All INTEROP channels are now narrow-banded so they will be referred to by their NPSTC/ANSI channel identifiers.

MONITORING

At a minimum, personnel must monitor the INTEROP channel prior to transmitting to minimize the possibility of interference with communications in-progress. Base stations are encouraged to monitor their local INTEROP repeated frequency at all times if any. Monitoring of VCALL10, UCALL40 7CALL50, 7CALL70 or 8CALL90 or is highly recommended.

An Interoperability channel can be the only means for personnel traveling outside their normal jurisdiction to obtain assistance or to report traffic collisions, fires, or other hazards. This includes the ability to monitor CSQ (squelch) or PL Tone 156.7 simultaneously with Agency PL tone.

Likewise, public safety personnel on travel status should consider using one of those 'CALL' channels on car-to-car or any local repeater covering the area to notify local dispatch centers when emergencies come to their attention. To hail a base station, a phrase such as: "Any car or station on UCALL40 , this is [unit ID] with emergency traffic" should be used. NOTE: The V/U/7&8CALL's are from the General Public Safety Pool and not exclusive to LE PSAP's.

IDENTIFICATION

Base stations identify themselves by using their agency name along with any other usual identifier. EX: ***"Chico PD Control-1."*** Base stations must use the FCC call sign shown on their Interop license at least once every 30 minutes or at the end of a contact. For example: ***"California KVZ29"***. Mobile & portable units should prefix their agency-assigned unit ID with plain language agency name. Ex: ***"Fresno PD 1-ADAM-12"***. Good interoperability identification habits are an essential part of clear plain language communications. Ex:***"CHP 58-501C, this is Sacramento PD 6-Paul-20"***.

CHANNEL USE PRIORITIES

INTEROP use is governed by a system of priorities that must be respected at all times. Priority is given to disaster and emergency operations, urgent operations, special events, and drills tests and exercises. The Priority -5, Single agency secondary communications is not for routine dispatching or tactical channels on a day-to-day basis unless approved by Cal OES TDO.

When a higher priority use is required, all lower priority traffic yields the frequency immediately.[3]

- **Priority 1**: Disaster and extreme emergency operations for mutual aid and interagency communications
- **Priority 2**: Emergency or urgent operations involving imminent safety of life or protection of property
- **Priority 3**: Special event control activities, such as a planned event involving the participation of two or more agencies
- **Priority 4**: Drills, tests and exercises
- **Priority 5**: Single agency secondary communications

[3] Please note that this 2016 update of the original plan and subsequent revisions, has changed the original numbering of the Priorities from 1, 2, 3, 3A, 4 to Priorities 1 through 5.

Notification of Priority Traffic (Priority 1, 2, 3, 4)

- Plain language must be used when clearing INTEROP channels for use in high priority situations.
- Agencies inform other area user agencies when they are involved in high priority usage of INTEROP channels by phone, email, or California Law Enforcement Telecommunications System (CLETS).
- Notify the Cal OES Telecommunications Duty Officer (TDO) of high priority usage via phone (916-845-8911), email (warning.center@oes.ca.gov), or CLETS.
- If two or more agencies in close proximity request a similar priority level clearance for simultaneous operations, contact the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov) for guidance.

Secondary Communications (Priority 5)

In the absence of Priority 1, 2, 3, and 4 situations, INTEROP channels may be approved for temporary use for day-to-day communications as a local agency secondary channel. However, there are specific limitations relative to such use:

- Prior to even considering using an INTEROP channel for a Priority 5, agencies must contact Cal OES Telecommunications Branch for consultation as to the need.
- Before using the channel for secondary communications, agencies first monitor the channel to ensure that no higher-priority communications are being conducted on that desired INTEROP channel.
- Use conforms to the operational standards outlined in this plan. This includes the ability to monitor CSQ (squelch) or PL Tone 156.7 simultaneously with Agency PL tone if applies.
- The channel is immediately vacated if it needs to be used for a Priority 1, 2, 3, or 4 situations.
- All INTEROP channels shall not be used as a primary or permanent secondary communications nor shall channels be renamed irrespective of the NIFOG or NPSTC formula's.

MESSAGE PRECEDENCE

Message Precedence is a classification system that establishes the priority of message content while a channel is in use – i.e., it helps determine which message has precedence over another on a channel. It is used for both verbal and written message traffic. The order of precedence of messages is:

1. **New Incident**: Messages pertaining to a new incident. Once the new incident is addressed, it no longer has precedence unless it has a higher priority.
2. **Emergency**: Messages involving the imminent safety of life or protection of property, including messages to request supplies, materials or instructions vital to relief of emergency operations.
3. **Priority**: Messages that are official and time-bound, but are not covered in the emergency category. Priority messages may include notice of deaths or injury in a disaster area.
4. **Welfare**: Messages involving the health and welfare of an individual in a disaster area.
5. **Routine**: Messages pertaining to routine operations.

PLAIN LANGUAGE

Plain Language, according to NIMS, is the use of common terms and definitions that can be understood by individuals from all responder disciplines.

All communications on INTEROP channels are in plain language as radio codes, acronyms, and abbreviations can cause confusion between agencies and disciplines and jeopardize officer safety.

VOICE PRIVACY

The use of INTEROP channels for transmission of encoded, encrypted, digital, or scrambled messages is prohibited. However, under special circumstances, a one-time waiver may be granted to allow for encryption. All inquiries and requests for waivers should be addressed to the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov).

OUT-OF-AREA/ITINERANT MOBILES

Base stations are encouraged to monitor the INTEROP channels of either VCALL10, UCALL40, 7CALL50, 7CALL70, or 8CALL90 (ICALL in SoCal) at all times. An INTEROP CALL channel can be the only means for personnel traveling outside their normal jurisdiction to obtain assistance or to report traffic collisions, fires, or other hazards. This includes the ability to monitor CSQ (squelch) or PL Tone 156.7 simultaneously with an Agency PL tone.

Likewise, personnel on travel status should consider using VCALL10 on car-to-car or any local area U/7/8CALL repeater covering the area to notify local PSAP's when emergencies come to their attention. To hail a base station, a phrase such as: "Any car or station on UCALL40 , this is [unit ID] with emergency traffic" can be used.

SUPERVISORY RESPONSIBILITY

Each agency manager and supervisor bears the responsibility for the compliance of operations on those INTEROP channels within their Operational Area and to this INTEROP Plan. Violations are reported to Cal OES who works with each agency's executives to correct reported problems. See Appendix A for the complaint procedure.

TECHNICAL STANDARDS AND PROCEDURES

POINT-TO-POINT COMMUNICATIONS

INTEROP frequencies are primarily designed to be used as base to mobile/portable and mobile/portable to mobile/portable channels. Base station to base station communications can be used as secondary uses but is not recommended. Default operation should be carrier squelch receive, CTCSS 156.7 Hz transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

POWER LIMITATIONS

On all channels, with all equipment, transmit power may not exceed 120 watts [ERP].

ANTENNA LIMITATIONS

With the obvious exceptions of authorized relay or repeater channels, high-Level base station installations are prohibited on all INTEROP channels. All base stations should be located at low antenna levels and not exceed the specified heights above the elevation of the primary dispatch center:

- UHF: 100 FT
- VHF: 500 FT
- 700 & 800 MHz: 100 FT

Under special circumstances, however, onsite waivers may be granted as long as a regional dispatch for other jurisdictions is provided by the requesting agency. In cases where interference occurs, Cal OES will withdraw waivers. All inquiries and requests for waivers should be addressed to the Cal OES TDO. (916-845-8911 or warning.center@oes.ca.gov).

CODED SQUELCH

Continuous Tone-Coded Squelch System (CTCSS) is a system incorporated in radios to reduce or eliminate nuisance type interference from co-channel users. Digital systems use a digital equivalent of CTCSS called Digital Coded Squelch (DCS) on analog systems and Network Access Code (NAC) on the digital P-25 standard systems. Coded squelch will not prevent destructive interference where the signal strength of the interfering signal exceeds that of the desired signal. The statewide CTCSS is 156.7 Hz on VHF Direct, UHF, 7/800 for analog systems and $293 for digital systems. On VHF Repeaters the statewide CTCSS is 136.5 Hz.

Coded squelch is prohibited for priority 1 and 2 situations. A locally designated CTCSS is authorized for priority 3, 4, and 5 traffic if the agency has the ability to continuously monitor a receiver with the universal mutual aid tone (156.7/$293) or has a receiver without the tone protection. These safeguards ensure that the channels can be used for communications with units from other agencies using carrier-squelch only or with the mutual aid tone.

MOBILE RELAY CONTROL PROVISIONS

Mobile relays must be equipped with a positive means of disabling the relay function from the primary control position to prevent system disruption by unwanted signals.

VOICE PRIVACY

Speech scrambling, digital voice privacy [DVP], digital and analog encryption [DES/AES], inversion, and other forms of scrambling are prohibited on all INTEROP channels. Under special circumstances, a one-time waiver may be granted to allow for voice privacy. All inquiries and requests for waivers should be addressed to the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov).

PAGING OR SIGNALING

Tone or digital signaling, paging and/or alerting is prohibited on all INTEROP channels except as provided below. However, simple alert tones [attention beeps] prior to broadcasts and automatic station identification are permitted.

DATA TRANSMISSION

Transmission of data is only provided on the following 700 MHz channels: 7DATA69 (800.74375 / 770.74375), 7DATA69D (770.74375), 7DATA89 (804.75625 / 774.75625), 7DATA89D (774.75625). Data transmissions are prohibited on all other INTEROP channels & bands.

FCC CALL SIGN ANNOUNCEMENTS

All stations must identify in accordance with FCC Rules and Regulations, Part 90.425. Each station or system must be identified by transmission of its FCC call sign:

- During each transmission, or exchange of transmissions, or
- Once each 30 minutes during periods of continuous operation

The call sign is the FCC-assigned set of letters and numbers found on the license authorization. Mobiles and Portables must identify with their agency assigned unit or officer number. Violations may result in revocation of the offending agency's operating authority.

TEMPORARY BASE STATION AND TEMPORARY MOBILE RELAY

Agencies may operate temporary base stations and/or mobile relays to handle Priority 1, 2, 3 or 4 traffic with Cal OES authorization. Temporary authorizations are issued for the duration of the incident or event. To request authorization, an email specifying the dates, equipment, frequencies, and situation is sent to the Cal OES TDO (warning.center@oes.ca.gov). The TDO will notify the requestor, the Cal OES Regional Communications Coordinator, upon approval of the request.

INTEROPERABILITY OPERATION

In the event of a public safety Priority 1 or 2 emergencies, and in keeping with appropriate FCC Rules, other systems may be *temporarily* cross-banded into INTEROP channels through automatic or manual equipment. A cross band or use of a gateway switch must be discontinued when the operation requiring its use is finished. The same rules apply to cross banding between various INTEROP channels. Contact the Cal OES TDO for special coordination information (916-845-8911 or warning.center@oes.ca.gov). Please refer to Cal OES's Statewide Gateway Units Standard Operating Procedure for more information on gateway procedures.

As with some CALAW & CAFIRE channels that are repeated, agencies may apply for coordinated repeaters for their area. What is specifically different however is that ONLY the national CTCSS (156.7 Hz) is allowed. Consequently all coordinated repeaters MUST be in a controlled "down" state until activation is permitted via Cal OES. Agencies may establish permanent repeater site licenses for those INTEROP channels that are repeated but those repeaters MUST remain off the air until authorized use is granted. The ONLY exception to this is the "CALL" repeaters which should remain operational but NEVER used for an additional "TAC" or local routine "chit-chat".

AIRBORNE OPERATION

The operation of INTEROP-equipped radios in aircraft is permitted when the restrictions below and FCC Part 90.423 rules are respected.

- The output power for helicopter and patrol aircraft radios must not exceed 10 watts.
- The limit for the 700 & 800 MHz INTEROP channels is 2 watts.
- Operators always monitor the channel prior to transmitting as the long range of airborne operations can impede operations already using the channel.

FREQUENCY PROTECTION

Adjacent channel interference can occur between frequencies when used in close proximity. Mitigation strategies, such as limiting the use of one of the adjacent channels during mutual aid activities, can help minimize or eliminate interference problems. Towards this effort it is imperative that all INTEROP channels, with the exception of the "CALL" frequencies, be "off" or inactive until authorization is given via Cal OES. Even INTEROP frequencies in "direct" or "simplex" mode can cause interference to operations hundreds of miles away. Those INTEROP channels must not be used as a secondary or primary "TAC" channel for various entities. Contact the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov) for additional information on limiting channel interference.

EXCEPTIONS

The technical standards incorporated into this INTEROP Plan preserve the integrity and reliability of the system while encouraging maximum use of the available channels. While applicants are expected to meet these requirements, it is understood that, under extraordinary circumstances, deviations from these regulations may be necessary. All such circumstances should be brought to the attention of the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov) at the time authorization is requested. A detailed description of the situation should be included in writing, as well as a justification for the action requested. Cal OES, with the counsel of the CalSIEC, will serve as the final decision point in such cases. Public safety and the integrity of the system are always the main considerations.

ESSENTIAL INTEROPERABILITY GUIDELINES CHECKLIST

- ✓ **OBEY PRIORITIES:** When a higher priority use is required, all lower priority traffic yields the frequency immediately.
- ✓ **USE PLAIN LANGUAGE AT ALL TIMES.**
- ✓ **IDENTIFY WITH FULL AGENCY UNIT DESIGNATOR AND FCC CALL-SIGNS (BASE STATIONS AND MOBILES).**
- ✓ **MONITOR THE CHANNEL PRIOR TO TRANSMITTING.**
- ✓ **USE APPROPRIATE CODED SQUELCH**: Do not use local tones on interoperability channels without the capability of monitoring the mutual aid tone (156.7/$293) or turning the tone protection off.
- ✓ **USE THE CHANNEL'S STANDARD ID**: Program the standard California channel ID into your radio's display.
- ✓ **DO NOT SCRAMBLE OR ENCRYPT MESSAGES.**
- ✓ **DO NOT PERMANENTLY OR SEMI-PERMANENTLY LINK MUTUAL AID CHANNELS TO EACH OTHER OR TO LOCAL AGENCY CHANNELS.**

Respect the policies and procedures set forth in each interoperability system's plan to ensure the interoperability channels are available for use in emergency situations.

APPENDIX A: COMPLAINT PROCEDURE

Report all operations on mutual aid channels that are detrimental to first responder safety or to the management of an incident, that fails to follow the procedures outlined in this mutual aid plan, which causes interference to other users, or that violates FCC Regulations 90.20 and 90.405.

To report flagrant violations that endanger first responder safety, immediately contact the TDO via the California State Warning Center (CSWC) (Telephone: 916-845-8911).

To report interference issues from outside sources and other misuses of any INTEROPERABILITY Channel:

1. Attempt to identify the offending station.
2. Contact the chief executive of that department.
3. If the problem persists, contact the Cal OES TDO via the CSWC (916-845-8911 or warning.center@oes.ca.gov) and relay:
    - The date and time of the problem
    - The circumstances regarding the interference or misuse
    - Information detailing how the misuse interfered with operations or safety
    - Information (identification, call signs, etc.) that would help locate the offending agency.
4. Keep audio logging tapes, tape cassettes, or digital files recording the misuse to send to Cal OES. [If requested, Cal OES will return the tape after its investigation.] On receipt of a complaint, Cal OES will conduct an investigation.

APPENDIX B: ACRONYM LIST

AES: Advanced Encryption Standard

ANSI: American National Standards Institute

Cal-IFOG: California Interoperability Field Operations Guide

Cal OES: California Governor's Office of Emergency Services

CalSIEC: California Statewide Interoperability Executive Committee

CALAW: California Law Enforcement Mutual Aid Radio Systems {LLAW1, LLAW1D, VLAW31, VLAW32, CALAW1, CALAW2, CALAW4, CALAW4D, CALAW5D, CALAW8, CALAW8D, CALAW9, CALAW9D}

CLERS: California Law Enforcement Radio System

CLETS: California Law Enforcement Telecommunications System

CSWC: California State Warning Center

CTCSS: Continuous Tone-Coded Squelch System

DCS: Digital Coded Squelch

DES: Data Encryption Standard

DVP: Digital Voice Privacy

FCC: Federal Communications Commission

LDO: Law Enforcement Division's Duty Officer

LE: Law Enforcement

LEB: Law Enforcement Branch

MAR: Mutual-Aid Region

NAC: Network Access Code

NIFOG: National Interoperability Field Operations Guide

NPSTC: National Public Safety Telecommunications Council

PSC: Public Safety Communications Division of Cal OES

POST: California Commission on Peace Officer Standards and Training

TCOMM: Telecommunications Branch

TDO: Telecommunications Duty Officer

APPENDIX C: NON-FEDERAL INTEROPERABILITY FREQUENCIES AND USAGE TABLES

CAL-IFOG/NIFOG NPSTC CHANNELS EXCEPTIONS

The following channels are authorized for Interoperability (INTEROP) operations in California as noted prior. This is a combination of California – only and National frequencies (Ref NIFOG & CAL-IFOG). VHF/UHF Band frequencies are narrowband FM with 12.5kHz authorized bandwidth. The designations "W" for wideband and "N" for narrowband are noted after each TX/RX frequency. Default analog tones (CTCSS) is 156.7 Hz for transmit & receive on point-to-point (simplex or direct) channels, VHF repeater analog tones are 136.5 Hz. It is permissible to use CSG or carrier squelch in direct channels on the user's mobile/portable equipment if not equipped with an option to defeat the receive tone. VHF repeaters are for temporary portable tactical use and not intended to be a permanent site. Digital P25 systems are on the 700MHz Band primarily and use the Network Access Code (NAC) which is $293 on transmit and $F7E on receive. $F7E is a universal code that receives all NAC codes. When no coded squelch is used, it is identified as "None". In general and for priority 1, 2, 3 and 4 situations, the universal tones (156.7Hz for analog and $293 for digital) should be used. Tables on following pages reflect the transmit & receive programming of base, mobile & portables and not repeaters.

CAL-IFOG/NIFOG NPSTC INTEROPERABILITY CHANNELS					
CHANNEL ID	**RX FREQ**	**RX CTCSS NAC**	**TX FREQ**	**TX CTCSS NAC**	**Notes**
VHF HIGH BAND					
VCALL10	155.7525 N	156.7	155.7525 N	156.7	Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
VTAC11	151.1375 N	156.7	151.1375 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
VTAC12	154.4525 N	156.7	154.4525 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
VTAC13	158.7375 N	156.7	158.7375 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
VTAC14	159.4725 N	156.7	159.4725 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
VTAC33	159.4725 N	156.7	151.1375 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5
VTAC34	158.7375 N	156.7	154.4525 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5
VTAC35	159.4725 N	156.7	158.7375 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5
VTAC36	151.1375 N	156.7	159.4725 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
VHF HIGH BAND {Cont}					
VTAC37	154.4525 N	156.7	158.7375 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5
VTAC38	158.7375 N	156.7	159.4725 N	136.5	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5
VTAC17*	161.8500 N	156.7	157.2500 N	156.7	Repeaters, Fixed Base, Mobile, Portable Deployable Tactical Repeaters FB2T **ONLY** Priority: 1, 2, 3, 4, 5 ***Restrictions Apply**
VTAC17D*	161.8500 N	156.7	161.8500 N	156.7	Fixed Base, Mobile, Portable ***Restrictions Apply** Priority: 1, 2, 3, 4, 5

*The VTAC17 & 17D can only be used in Alpine, Inyo, Lassen, Mono, Plumas and Sierra Counties. These channels use the same frequencies as VHF Marine channel 25, which uses wideband FM. In these authorized areas, interoperability communications have priority over grandfathered public coast and public safety licenses. Fixed Base Stations and Repeaters are limited to 50 watts max and antenna HAAT at 400 feet maximum. Mobile stations are limited to 20 watts maximum and antenna HAAT at 15 feet maximum. These channels use narrowband FM and are available only in these areas of California due to the terrain of the Sierras. These channels are for tactical use and may not be operated on board aircraft in flight. "Blanket authorization" does not apply – use of these channels must be licensed, or authorized by STA. {FCC 90.20(g)(3)}

UHF TYPE 1 BAND					
UCALL40	453.2125 N	156.7	458.2125 N	156.7	Repeaters, Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
UCALL40D	453.2125 N	156.7	453.2125 N	156.7	Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
UTAC41	453.4625 N	156.7	458.4625 N	156.7	Repeaters, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
UTAC41D	453.4625 N	156.7	453.4625 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
UTAC42	453.7125 N	156.7	458.7125 N	156.7	Repeaters, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
UTAC42D	453.7125 N	156.7	453.7125 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
UTAC43	453.8625 N	156.7	458.8625 N	156.7	Repeaters, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
UTAC43D	453.8625 N	156.7	453.8625 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
700 MHz BAND					
7CALL50	769.24375 N	$F7E	799.24375 N	$293	*Repeater, Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
7CALL50D	769.24375 N	$F7E	769.24375 N	$293	*Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
7TAC51	769.14375 N	$F7E	799.14375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC51D	769.14375 N	$F7E	769.14375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC52	769.64375 N	$F7E	799.64375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC52D	769.64375 N	$F7E	769.64375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC53	770.14375 N	$F7E	800.14375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC53D	770.14375 N	$F7E	770.14375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC54	770.64375 N	$F7E	800.64375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC54D	770.64375 N	$F7E	770.64375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC55	769.74375 N	$F7E	799.74375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC55D	769.74375 N	$F7E	769.74375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC56	770.24375 N	$F7E	800.24375 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC56D	770.24375 N	$F7E	770.24375 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7GTAC57	770.99375 N	$F7E	800.99375 N	$293	*Repeater, Fixed Base, Mobile, Portable Other Public Service (NGO) Priority: 1, 2, 3, 4, 5
7GTAC57D	770.99375 N	$F7E	770.99375 N	$293	*Fixed Base, Mobile, Portable Other Public Service (NGO) Priority: 1, 2, 3, 4, 5
7MOB59	770.89375 N	$F7E	800.89375 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Repeater Priority: 1, 2, 3, 4, 5

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
700 MHz BAND {Cont}					
7MOB59D	770.89375 N	$F7E	770.89375 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Repeater Direct Mode Priority: 1, 2, 3, 4, 5
7CALL70	773.25625 N	$F7E	803.25625 N	$293	*Repeater, Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
7CALL70D	773.25625 N	$F7E	773.25625 N	$293	*Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
7TAC71	773.10625 N	$F7E	803.10625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC71D	773.10625 N	$F7E	773.10625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC72	773.60625 N	$F7E	803.60625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC72D	773.60625 N	$F7E	773.60625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC73	774.10625 N	$F7E	804.10625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC73D	774.10625 N	$F7E	774.10625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC74	774.60625 N	$F7E	804.60625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC74D	774.60625 N	$F7E	774.60625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC75	773.75625 N	$F7E	803.75625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC75D	773.75625 N	$F7E	773.75625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC76	774.25625 N	$F7E	804.25625 N	$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7TAC76D	774.25625 N	$F7E	774.25625 N	$293	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7GTAC77	774.85625 N	$F7E	804.85625 N	$293	*Repeater, Fixed Base, Mobile, Portable Other Public Service (NGO) Priority: 1, 2, 3, 4, 5
7GTAC77D	774.85625 N	$F7E	774.85625 N	$293	*Fixed Base, Mobile, Portable Other Public Service (NGO) Priority: 1, 2, 3, 4, 5

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
700 MHz BAND {Cont}					
7MOB79	774.50625 N	$F7E	804.50625 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Repeater Priority: 1, 2, 3, 4, 5
7MOB79D	774.50625 N	$F7E	774.50625 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Repeater Direct Mode Priority: 1, 2, 3, 4, 5
7DATA69	770.74375 N	$F7E	800.74375 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Data Capability Priority: 1, 2, 3, 4, 5
7DATA69D	770.74375 N	$F7E	770.74375 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Data Capability Direct Mode Priority: 1, 2, 3, 4, 5
7DATA89	774.75625 N	$F7E	804.75625 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Data Capability Priority: 1, 2, 3, 4, 5
7DATA89D	774.75625 N	$F7E	774.75625 N	$293	*Repeater, Fixed Base, Mobile, Portable Mobile Data Capability Direct Mode Priority: 1, 2, 3, 4, 5
800 MHz BAND					
8CALL90	851.0125 W	CSQ	806.0125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
8CALL90D	851.0125 W	CSQ	851.0125 W	156.7	*Fixed Base, Mobile, Portable Recommend 24hr PSAP Monitoring Priority: 1, 2, 3, 4, 5
8TAC91	851.5125 W	CSQ	806.5125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC91D	851.5125 W	CSQ	851.5125 W	156.7	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC92	852.0125 W	CSQ	807.0125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC92D	852.0125 W	CSQ	852.0125 W	156.7	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC93	852.5125 W	CSQ	807.5125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC93D	852.5125 W	CSQ	852.5125 W	156.7	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC94	853.0125 W	CSQ	808.0125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
8TAC94D	853.0125 W	CSQ	853.0125 W	156.7	*Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5

SPECIAL CHANNELS EXCEPTIONS

NOTES: The 700 MHz Band is ONLY P25 using the NAC's, TX-$293 RX-$f7E. It is divided into 12.5 kHz narrowband channels shown as odd-even channel pairs of 6.25 kHz channels.
(Ref: http://www.apco911.org/frequency/documents/700_NB_channel_centers.pdf

The 800 MHz Band default operation should be carrier squelch receive, and CTCSS (156.7 Hz) transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone could also be programmed for receive, and the user instructed how and when to enable/disable. Note that the 800 MHz Band is Wideband FM (20K0F3E)

FOR SOUTHERN CALIFORNIA ONLY: The older "ICALL, ITAC1 – ITAC4" channels may be still in use due to mitigating circumstances with Mexico. For the purposes of this document, those channels are not listed. The newer (7-8TAC) frequencies may be programmed into users radios but not used until such time as all SoCal has been converted over. Consult the Southern Planning Area (SPA) or your Cal OES Region Communications Coordinator for updated details.

The following channels are included in the NIFOG but they are currently not included as an itemized table in this document:

- The 700MHz Nationwide Air-Ground Channels: 7AG58 – 7AG88.
- The 25 Cities Project (Federal Interoperability Channels), San Francisco, Los Angeles and San Diego.

The following applies: 7DATA69 & 7DATA89 can be used as voice communications on a secondary basis.

APPENDIX E: INOP UHF / 700 / 800 REPEATER LOCATIONS

NOTE: Repeaters listed are known fixed locations as coordinated by Cal OES PSC & licensed accordingly. Agencies licensed MUST be able to toggle these repeaters "on/off" with the exception of all the "CALL" designated repeaters. Radio frequency channels listed reflect the repeater rx/tx not the user mobile, base or portable. Agency CTCSS Tones are NOT AUTHORIZED. Only CTCSS 156.7 Hz is allowed on UHF and 800. The 700 MHz Band is ONLY P25 using the default NAC's (TX: $F7E RX: $293).

{Please provide Cal OES with current or updated information on the following locations.}

UCALL40 UHF (458.2125 / 453.2125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

UTAC41 UHF (458.4625 / 453,4625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

UTAC42 UHF (458.7125 / 453.7125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

UTAC43 UHF (458.8625 / 453.8625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7CALL50 (799.24375 / 769.24375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC51 (799.14375 / 769.14375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC52 (799.64375 / 769.64375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC53 (800.14375 / 770.14375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC54 (800.64375 / 770.64375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC55 (799.74375 / 769.74375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC56 (800.24375 / 770.24375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7GTAC57 (800.99375 / 770.99375 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7CALL70 (803.25625 / 773.25625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC71 (803.10625 / 773.10625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC72 (803.60625 / 773.60625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC73 (804.10625 / 774.10625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC74 (804.60625 / 774.60625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC75 (803.75625 / 773.75625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7TAC76 (804.25625 / 774.25625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

7GTAC77 (804.85625 / 774.85625 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

8CALL90 (806.0125 / 851.0125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

8TAC91 (806.5125 / 851.5125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

8TAC92 (807.0125 / 852.0125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

8TAC93 (807.5125 / 852.5125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

8TAC94 (808.0125 / 853.0125 MHz) LICENSED REPEATER LOCATIONS					
MAR	**RX Tone(s)**	**TX Tone(s)**	**County**	**Site**	**FCC License**

APPENDIX F: INTEROPERABILITY CHANNEL REQUEST PROTOCOL

Channel Request Process:

{Refer to APPENDIX C for specific frequencies.}

To minimize the interference and misuse of California's statewide interoperability channels, Cal OES has updated and streamlined the process to request an interoperability channel for pre-planned events. It is expected that during emergencies, public safety representatives will make immediate use of the interoperability channels for which they are licensed. This is particularly true for specific Law Enforcement and Fire Fighting operations. However, even though an agency is licensed for use on a discipline-specific channel, repeated or non-repeated, does not give permission for a day-to-day routine "Tactical" or secondary "Dispatch" use*. Law-specific channels are still coordinated through a process particularly for pre-planned events. This guide will outline the multi-discipline interoperability channels.

The salient points of this process are that the California State Warning Center (CSWC) is the single point of entry for all interoperability channel requests for pre-planned events and that it is the discipline-specific duty officers who allocate the channels. The duty officers will only decline a request for the use of an interoperability channel if its use would cause interference for another agency or jurisdiction. Once a request has been sent, it is assumed that you may use the requested channel unless you hear otherwise from a duty officer. All questions about requesting Interoperability Channels should be addressed to the Telecommunications Duty Officer at "mailto:tdo@caloes.ca.gov".

To Request a Channel:

1. Determine what channel will best fit your pre-planned event's needs.{ex:VTAC33, 8TAC94}

2. Send a request to the CSWC by email to: "mailto:warning.center@oes.ca.gov" or by phone 916-845-8911. All Law Enforcement channel requests should be sent via a California Law Enforcement Telecommunications System (CLETS) message. The requests should contain the following information:
   a. County (ex: San Bernardino)
   b. Frequency (ex: VTAC11)
   c. Contact Information (Requestor name and/or alternate, 24h POC and agency. ex: Joe Smith; 111-555-1212; jsmith@sbf.gov)
   d. Phone (requestor and/or alternate)
   e. Email Address (requestor and/or alternate)
   f. Incident priority level (ex: Priority 3)
   g. Event description (explanation of communications needs, ex: Testing VTAC11 for multi day exercise.)
   h. Start date
   i. Start time
   j. End date
   k. End time
   l. Attach your ICS-205 if it is available.

3. When you are finished using the channel or your allocated time has expired, you must cease use of the channel and repeaters so that it will be available for others to use. To extend the use of a channel, a new channel request must be submitted.

*EXCEPTIONS: The four '**VCALL, UCALL, 7CALL, 8CALL**' specific channels are authorized to be operational at all times and PSAP's are encouraged to monitor those channels that they are licensed for, however, routine use as secondary dispatch, tactical, or "chit-chat" is extremely discouraged.