



CALAW

CALIFORNIA LAW ENFORCEMENT MUTUAL AID RADIO SYSTEMS



**Operations Response Division
Telecommunications Branch
3650 Schriever Avenue
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OVERVIEW

The California Law Enforcement Mutual Aid Radio Systems (CALAW) is provided and managed by the California Governor's Office of Emergency Services (Cal OES). CALAW enhances the ability of law enforcement agencies to communicate on common frequencies during emergencies and other special operations.

This plan governs the 13 CALAW channels in each of the public safety radio bands and the Non-Federal Law Enforcement Mutual Aid Channels (LLAW, VLAW, 7LAW) listed in the National Interoperability Field Operations Guide (NIFOG) using the National Public Safety Telecommunications Council (NPSTC) channel naming convention which are all considered part of the Law pool of frequencies in California. As such, CALAW provides a communications option for Law Enforcement officials regardless of the band their equipment operates in or the jurisdiction with which they are communicating. The California Law Enforcement Radio System (CLERS) is also considered a part of the Law pool in California and is outlined in a separate document.

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 CALAW Plan. All CALAW 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 CALAW channels.

SYSTEM MANAGEMENT

The ultimate authority for operations on CALAW 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. 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 CALAW 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 CALAW is shared by two branches within the Operations Response Division: the Cal OES Law Enforcement Branch (LEB) and the Telecommunications Branch (TCOMM). The Cal OES LEB establishes and enforces procedures for participation in, and use of, the system. Cal OES Law Enforcement Coordinators ensure that the system's frequencies are used properly and in a coordinated manner. The Cal OES TCOMM is responsible for technical standards and procedures. The Telecommunications Branch Coordinators assist and advise on technical matters.

Police Chiefs and Sheriffs are responsible for ensuring that applications, licensing and operations on CALAW comply with the regulations and policies set forth in this document within their agency. Law Enforcement Mutual Aid Regional Coordinators are responsible for the compliance of system operations within each Mutual Aid Region.

ELIGIBILITY

Law enforcement entities, as defined by the California Commission on Peace Officer Standards and Training (POST), and agents authorized and designated by such entities are eligible to participate in the CALAW plan.

Agencies that have signed the California Master Mutual Aid Agreement support other law enforcement agencies during emergencies, and are capable of rendering mutual aid are also eligible to participate in CALAW.

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 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 into mobiles & portables must request authorization from the Cal OES Telecommunications Branch to use the statewide mobile/portable licenses. Agencies that desire to program channels into “Fixed Sites” must request authorization from the Cal OES Public Safety Communications Branch (PSC). ¹In 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.

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 contract charges are \$100 and up, per frequency, per location. There is also a flat rate charge of 2 hours of engineering at \$145/hr to process the application package and any necessary supporting documentation that may be needed.

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

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>

MOBILES AND PORTABLES

1	Draft a “Letter of Intent” (LOI) on your agency letterhead <i>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.</i>
2	Complete the State of California Radio Frequency Usage Form (TDe-400) <i>This form is required by PSCO and requires the requesting agency to provide technical details</i>
3	Sign Memorandum of Understanding (MOU) <i>State designate mutual-aid plans require requesting agencies to sign associated MOU. Non-federal National Interoperability Channels only require a TDe-400.</i>
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 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 be coordinated and receive support of neighboring jurisdictions. To accomplish this, the applicant will need an endorsement from their respective Planning Area of CalSIEC before the Cal OES PSC Branch 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 do apply to these requests. Contact the Cal OES PSC frequency coordination and FCC licensing unit (916) 657-6153 to determine the associated costs.

1	<p>Draft a Letter of Intent (LOI) on your agency letterhead</p> <p>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.</p>
2	<p>Fill out a FCC 601 license request form and attachments D and H</p> <p>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.</p>
3	<p>Send the LOI and completed form(s) via postal mail or email to:</p> <p>California Governor’s Office of Emergency Services Attn: Telecommunications Branch 3650 Schriever Avenue Mather, CA 95655 Email: tdo@caloes.ca.gov</p>
4	<p>Develop a proposal package</p> <p>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.</p> <p>The CalOES Telecommunications Branch is available to assist with the coordination process.</p>

5

Submit proposal package for CalSIEC Planning Area review

Proposal packages must be reviewed by a CalSIEC Planning Area prior to endorsement. Check with your Planning Area governance body for when the next meeting is scheduled. It is recommended that you contact the Planning Area chair and arrange to have your proposal package reviewed by their committee. System proposals must be in compliance with State and Federal guidelines for Mutual-Aid and Interoperability 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 CalOES Telecommunications Branch for assistance with contacting the CalSIEC Planning Areas. More information can also be found on the Cal OES PSC Branch website at <http://www.caloes.ca.gov/Cal-OES-Divisions/Public-Safety-Communications>

6	<p>Forward the CalSIEC Planning Area endorsement to the Cal OES, Telecommunications Branch.</p>
7	<p>CalSIEC Formal Review</p> <p>Following the CalSIEC Planning Area endorsement, the Cal OES TComm Branch will review and provide final endorsement.</p> <p>The CalSIEC Planning Area & TComm Branch endorsement will be forwarded to the Cal OES PSC Branch FCC Unit for administrative processing.</p>
8	<p>Program Radios/Equipment</p> <p>Requestors may program channels into radios but may not transmit until final FCC authorization is received.</p> <p>Contact the Cal OES PSC Branch FCC Unit at (916) 657-6153 for a status on FCC authorization.</p>

OPERATIONAL STANDARDS

PERMISSIBLE COMMUNICATIONS

CALAW frequencies are for official law enforcement use only.

All communications on the CALAW frequencies are in accordance with Part 90, Subpart B of FCC Regulations (Public Safety Radio Pool). CALAW participants transmit communications essential to official law enforcement activities of the licensee. Unofficial communications on CALAW are prohibited and may result in revocation of licensee authorizations. CALAW frequencies are considered 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 and NPSTC Channel Identifiers are used for all “LAW” channels, i.e. CALAW is referred to as “CALAW” only.² It is strictly prohibited to assign a local identifier to any CALAW or NPSTC channel.

MONITORING

At a minimum, personnel must monitor the CALAW channel prior to transmitting to minimize the possibility of interference with communications in-progress. Base stations are encouraged to monitor their local CALAW repeated frequency at all times if any. In lieu of any repeated channel, monitoring of CALAW1, VLAW31 or any of the inter-discipline call channels such as VCALL10 or UCALL40 is 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 (squellch) or PL Tone 156.7 simultaneously with Agency PL tone.

Likewise, law enforcement personnel on travel status should consider using CALAW1, VLAW31 or VCALL on car-to-car or any local area U/7/8CALL repeater covering the area to notify local law enforcement agencies 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 CALAW 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”**.

² CALAW channels are now all narrow-banded so they will be referred to by their NPSTC/ANSI channel identifiers.

CHANNEL USE PRIORITIES

CALAW 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. CALAW 1, 4, 5, 6, 7, 20, 21, and 22 may be used for secondary communications on a temporary basis when not being used for a higher priority.

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

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

- Plain language must be used when clearing a CALAW channel for use in high priority situations.
- Agencies inform other area user agencies when they are involved in high priority usage of CALAW channels by phone, email, or California Law Enforcement Telecommunications System (CLETS).
- Notify the Cal OES Law Duty Officer (LDO) 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 LDO (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, CALAW channels (except for CALAW1, CALAW2, VLAW31 and VLAW32) may be temporarily used for day-to-day communications as a local agency secondary channel. However, there are specific limitations relative to such use:

- 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 CALAW 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.
- The channel is immediately vacated if it needs to be used for a Priority 1, 2, 3, or 4 situations.
- All CALAW channels shall not be used as a primary or permanent secondary communications nor shall channels be renamed without consent from Cal OES Law Enforcement Branch (LEB).

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.

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 CALAW channels are in plain language as radio codes, acronyms, and abbreviations can cause confusion between agencies and disciplines and jeopardize officer safety. Again, it is highly recommended that agency's use their agency plain language name as a prefix to agency-assigned unit ID's. Ex: "**Cal OES 5170**".

VOICE PRIVACY

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

SUPERVISORY RESPONSIBILITY

Each agency manager and supervisor bears the responsibility for the compliance of operations on CALAW to the CALAW Plan. Violations are reported to Cal OES who will work with each agency's executives to correct reported problems. See Appendix A for the complaint procedure.

TECHNICAL STANDARDS AND PROCEDURES

POINT-TO-POINT COMMUNICATIONS

CALAW frequencies are primarily designed to be used as base to mobile/portable and mobile/portable to mobile/portable channels for Interoperability *TACTICAL* communications. Base station to base station communications can be used as secondary uses but is not recommended. The California Law Enforcement

Radio System (CLERS) is primarily designed to provide a base to base between law enforcement dispatch centers or offices. The other difference between CALAW & CLERS is that CLERS is on the State Microwave System and has been programmed with certain special features. Details on CLERS are contained in that separate, but equal, plan.

POWER LIMITATIONS

On all channels, with all equipment, transmit power may not exceed 120 watts [ERP]. The exceptions are CALAW2 which is limited to a maximum of 10 watts of output power at all times and airborne transmitters, which may not exceed 10 watts with a 1 watt restriction on LLAW1 through CALAW9.

ANTENNA LIMITATIONS

With the obvious exceptions of authorized repeater channels, high-Level base station installations are prohibited on CALAW. 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, on-site waivers may be granted as long as 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 LDO or TDO. (916-845-8911 or warning.center@oes.ca.gov).

VOICE PRIVACY

Speech scrambling, digital voice privacy [DVP], digital and analog encryption [DES/AES], inversion, and other forms of scrambling are prohibited on all CALAW 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 LDO or TDO (916-845-8911 or warning.center@oes.ca.gov).

DATA TRANSMISSION

Transmission of data is prohibited on CALAW channels.

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 for analog systems and \$293 for digital systems.

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.

PAGING OR SIGNALING

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

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 LDO or TDO (warning.center@oes.ca.gov). The LDO or TDO will notify the requestor, the Cal OES Regional Communications Coordinator, and the Regional Law Enforcement Coordinator upon approval of the request.

INTEROPERABILITY OPERATION

In the event of a public safety Priority 1 or 2 emergency, and in keeping with appropriate FCC Rules, other systems may be *temporarily* cross-banded into a CALAW channel 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 CALAW channels. Contact the Cal OES LDO or 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.

AIRBORNE OPERATION

The operation of CALAW-equipped radios in aircrafts 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 power limit for the 700 & 800 MHz CALAW channels is 1 watt.
- 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.

Cal OES will establish guidelines for protecting the channels adjacent to CALAW as the State transitions to narrowband operations.

Contact the Cal OES TDO (916-845-8911 or warning.center@oes.ca.gov) for additional information on limiting channel interference.

EXCEPTIONS AND DEVIATIONS

The technical standards incorporated into the CALAW 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 LDO or 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. Officer 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 CALAW:

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: CALAW FREQUENCIES AND USAGE TABLE

CAL-IFOG/NIFOG NPSTC CHANNELS EXCEPTIONS AND DEVIATIONS

The following channels are authorized for Law Enforcement operations in California as noted prior. This is a combination of California – only and National frequencies (Ref NIFOG & CAL-IFOG). Low Band frequencies are wideband FM with 20kHz authorized bandwidth. 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 156.7Hz for transmit & receive on point-to-point (simplex or direct) channels, repeaters will usually have different tones for input based on licensed agency. It is permissible to use CSG or carrier squelch in direct channels on the user’s mobile/portable equipment. The universal analog coded squelch tone (CTCSS) is 156.7Hz. 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. For priority 5 operations, an agency assigned CTCSS may be used only if the agency monitors the universal analog (CTCSS) or digital (NAC) codes.

CAL-IFOG/NIFOG NPSTC LE CHANNELS

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
VHF LOW BAND					
LLAW1	39.4600 W	156.7	45.8600 W	156.7	Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
LLAW1D	39.4600 W	156.7	39.4600 W	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
VHF HIGH BAND					
VLAW31	155.4750 N	156.7	155.4750 N	156.7	Fixed Base, Mobile, Portable Priority: 1 & 2 ONLY
VLAW32	155.4825 N	156.7	155.4825 N	156.7	Fixed Base, Mobile, Portable Priority: 1 & 2 ONLY
CALAW1	154.9200 N	156.7	154.9200 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4 ONLY
CALAW2	154.9350 N	156.7	154.9350 N	156.7	Mobile, Portable 10watts max output power, on-scene & command post channel only; NO Fixed Base Stations can be licensed on this channel. Priority: 1 & 2, ONLY

CHANNEL ID	RX FREQ	RX CTCSS NAC	TX FREQ	TX CTCSS NAC	Notes
UHF TYPE 1 & 2 BAND					
CALAW4	460.0250 N	Varies*	465.0250 N	156.7	*Repeater, Fixed Base, Mobile, Portable/Mobile TX CTCSS depends on the repeaters (mobile relay) being used. Priority: 1, 2, 3, 4, 5
CALAW4D	460.0250 N	156.7	460.0250 N	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
CALAW5D	484.2375 N	156.7	484.2375 N	156.7	Fixed Base, Mobile, Portable *Available only for agencies with base stations located within 50 miles of Los Angeles City Hall; mobiles & portables within 80 miles. Priority: 1, 2, 3, 4, 5
700 MHz BAND					
7LAW61	770.39375 N	\$F7E	800.39375 N	\$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW61D	770.39375 N	\$F7E	770.39375 N	\$293	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW62	770.49375 N	\$F7E	800.49375 N	\$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW62D	770.49375 N	\$F7E	770.49375 N	\$293	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW81	774.00625 N	\$F7E	804.00625 N	\$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW81D	774.00625 N	\$F7E	774.00625 N	\$293	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW82	774.35625 N	\$F7E	804.35625 N	\$293	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
7LAW82D	774.35625 N	\$F7E	774.35625 N	\$293	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
800 MHz BAND					
CALAW8	853.5125 W	156.7	808.5125 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
CALAW8D	853.5125 W	156.7	853.5125 W	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
800MHz BAND (Cont)					
CALAW9	851.2000 W	156.7	806.2000 W	156.7	*Repeater, Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5
CALAW9D	851.2000 W	156.7	851.2000 W	156.7	Fixed Base, Mobile, Portable Priority: 1, 2, 3, 4, 5

APPENDIX D: CALAW REPEATER LOCATIONS

NOTE: CTCSS Tones listed are licensee tones. The control PSAP must be able to monitor the statewide CTCSS Tone of 156.7. Radio frequency channels listed reflect the repeater rx/tx not the user mobile, base or portable.

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

LLAW1 VHF Low (45.860/39.460 MHz) LICENSED REPEATER LOCATIONS					
MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
1			Orange	Santiago Peak	KBV892
1			Orange	Sierra Peak	KBV892
1			Orange	Signal Peak	KBV892
1			Orange	San Clemente Peak	KBV892
1			Orange	Moorhead Reservoir	KBV892
2			San Francisco	Christmas Tree Point	KQS275
3			Sutter	Sutter Buttes	Applied for
4			Nevada	Truckee	KAZ604

CALAW5 UHF (465.025/460.025 MHz) LICENSED REPEATER LOCATIONS

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	Call Sign
1			Los Angeles	Culver City	WQCB548
1			Orange	Ortega Hwy Site	WQFR948
1			Orange	San Juan Capistrano	WQFR948
1			Orange	Fullerton	WQFR948
1			Orange	Santiago Canyon. Rd.	KBV892
1	103.5	103.5	Orange	Santiago Peak	KBV892
1			Orange	Sierra Peak	KBV892
1			Orange	Signal Peak	KBV892
1			Orange	San Clemente Peak	KBV892
1			Orange	Moorhead Res.	KBV892
2			Alameda	Albany	KKG946
2			Alameda	Oakland	KQP502
2			Contra Costa	Martinez	KRX568
2			Contra Costa	Walnut Creek	KZO392
2			Contra Costa	Antioch	KNNF498
2			Monterey	Salinas	KTS628
2	167.9	167.9	San Francisco	San Francisco	KQS275

CALAW5 UHF (465.025/460.025 MHz) LICENSED REPEATER LOCATIONS (Cont)

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	Call Sign
2			San Francisco	Christmas Tree Point	KQS275
2			Santa Clara	San Jose	KTV807
2	127.3	127.3	Sonoma	Santa Rosa	KMK981
2			Solano	San Francisco	KYJ331
2			Solano	Vallejo	WNV904
3	156.7	156.7	Sutter	Sutter Buttes	Projected
4	CSQ	CSQ	Nevada	Truckee	KAZ604
4			Sacramento	Sacramento	WPMF457
4	127.3	127.3	Sacramento	Sacramento CHP	KYK296
4			Sacramento	Sacramento	WQJM400
4	186.2	186.2	San Joaquin	Lodi	KXU225
4			San Joaquin	Stockton	KZF907
4			Stanislaus	Modesto	WQP824
5	146.2	146.2	Fresno	Fresno	WNBM858
5			Fresno	Fresno	WNBM858
5			Fresno	Clovis	KYI953
5	131.8	131.8	Kern	Bakersfield	WNFX713

CALAW5 UHF (465.025/460.025 MHz) LICENSED REPEATER LOCATIONS (Cont)

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	Call Sign
5			Madera	Chowchilla	KMK974
5			Tulare	Visalia	KNEX656
6			Riverside	Palm Springs	WNLB940
6			Riverside	Box Springs	WPIZ329
6			Riverside	Desert Center	WPIZ329
6			Riverside	Elsinore Peak	WPIZ329
6			Riverside	Santa Rose Mt.	WPIZ329
6			Riverside	Indio	WPIZ329
6			Riverside	Blyth	WPIZ329

CALAW8 (808.5125/853.5125 MHz) LICENSED REPEATER LOCATIONS

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
1	None		Orange	Santiago Peak, Riverside Co.	WPIT716
2			Contra Costa #	Carriage Hills	WQIV969
2			Contra Costa #	Hilltop	WQIV969
2			Contra Costa #	Marina Way	WQIV969
2			Santa Clara #	San Jose	WPES897

CALAW8 (808.5125/853.5125 MHz) LICENSED REPEATER LOCATIONS (Cont)

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
2			San Francisco #	Airport	WQJR602
3	None				
4			Sacramento #	Sacramento	WQIB408
4			Sacramento #	Sacramento, Capitol area	WNXW544
5	None				
6	None				

CALAW9 (806.2000/851.2000 MHz) LICENSED REPEATER LOCATIONS

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
1			Los Angeles	Rolling Hills	WPPX553
1			Los Angeles	Vurdugo Peak	WPPX553
1			Orange	San Clemente Peak	WPIT431
1			Orange	Orange, Santiago Canyon Rd.	WPIT439
1			Orange	Brea, Olinda Site	WPIT443
1			Orange	Signal Peak	WPIT451
1			Orange	Moorehead Reservoir	WPIT718
1			Orange	Carbon Canyon Reservoir	WPIT723
1			Orange	Bolero Peak	WPIT724

CALAW9 (806.2000/851.2000 MHz) LICENSED REPEATER LOCATIONS (Cont)

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
1			Orange	Yorba Linda	WPIT727
1			Orange	Fullerton	WQFS553
1			Orange	Seal Beach	WQFS553
1			Orange	Sierra Peak, Riverside Co.	WPIT445
1			Orange	Santiago Peak, Riverside Co.	WPIT716
2			San Francisco	Christmas Tree Point	WQJR602
3			Sutter	Sutter Buttes	Applied for
4			Sacramento	Vacaville, Solono Co.	WQIB408
4			Sacramento	Carpentar Peak	WQIB408
4			Sacramento	Davis Airport, Yolo Co.	WQIB408
4			Sacramento	Davis, Yolo Co.	WQIB408
5	None				
6			Riverside	Santa Rosa Mt.	WQFU769
6			Riverside	Mount David	WQFU769
6			Riverside	Blythe	WQFU769
6			Riverside	Indio	WQFU769
6			Riverside	Elsinore Peak	WQFU769
6			Riverside	Desert Center	WQFU769

CALAW9 (806.2000/851.2000 MHz) LICENSED REPEATER LOCATIONS (Cont)

MAR	RX Tone(s)	TX Tone(s)	County	City/Site	CALL SIGN
6			Riverside	Cactus City	WPIT743
6			Riverside	Black Rock	WPIT742
6			Riverside	Whitewater Hill	WPIT739
6			Riverside	Box Springs	WPIT741
6			San Diego	San Marcos Hill	WPNV382
6			San Diego	Los Pinos Hill	WPNV382
6			San Diego	Monument Peak	WPNV382
6			San Diego	San Miguel Mt.	WPNV382
6			San Diego	North Peak	WPNV382
6			San Diego	Palomar Mt.	WPNV383
6			San Diego	Red Mt.	WPNV383
6			San Diego	Jacumba	WPNV383

Channel Request Process:

{Refer to CALIFOG & NIFOG 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 all Law Enforcement 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: VLAW31, CALAW2}
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: VLAW32)
 - 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 VLAW32 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.