# RADIO USE PROGRAM TEXT



# CARE AND USE OF THE CDF RADIO SYSTEM

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# TABLE OF CONTENTS

INTRODUCTION	2
BASIC RADIO THEORY	3
RADIO EQUIPMENT	5
RADIO NETS	8
USING THE MICROPHONE	
TONES	
MOBILE RELAYS	
DIRECT	19
MESSAGE FORMULATION	
STRUCTURING MESSAGES	
ACKNOWLEDGING MESSAGES RECEIVED	
TIPS ON PROPER MESSAGE SENDING & RECEIVING	
RULES OF RADIO USE	
24-HOUR TIME	
TYPES OF MESSAGES	41
TRAVEL PROCEDURE	
INCIDENT/ORDER NUMBER	
RADIO USE REVIEW QUESTIONS	
APPENDIX A GLOSSARY	A-1
APPENDIX B ALPHA IDENTIFIERS	B-1
APPENDIX C CLEAR TEXT WORDS AND PHRASES	C-1
APPENDIX D PHONETIC ALPHABET AND NUMERICAL PRONUNCIATIONS	D-1
APPENDIX E RADIO IDENTIFICATION PLAN	E-1
APPENDIX F MACS 410-2	F-1
APPENDIX G KENWOOD TK-790 MOBILE RADIO	G-1
APPENDIX H KENWOOD CDF COMMUNICATIONS	H-1



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# **INTRODUCTION**

As of 2006, the California Department of Forestry and Fire Protection had over 7,000 individual radios in its VHF radio system with a value placed at over 10 million dollars. The increasing potential of having all of them in use at the same time makes it imperative that each individual user be educated in the rules, regulations, and policy of their use.

The duty of each CDF employee is to exercise proper and judicious use of the communications network in order for the system to be used to its fullest potential. Any misuse of the system will immediately infringe on the rights of other users and will, in fact, *hamper emergency operations*.

Communications on the fireline comes in many forms: hand signals; use of runners; mirrors; whistles or air horns; face to face; transmitted voice; and written messages. The best and most reliable form of communication is face to face, with written notes to record what was said.

It should go without saying, but fire department radios are "*For Official Use Only*" and even if you have official business emergency traffic has priority.

Education of the user is the primary means that can be used to prevent or sometimes correct improper use of the communications network. This text has been designed to instruct you in the basic fundamentals of the CDF Telecommunications system.

In reading through this text, you will notice after some sections there are related questions. Answer each question completely; you may wish to research Handbooks 6400, 7700, 8000, 8100, 8300, or 8600. Please be neat and concise in your answers, your instructor will be checking your work. Please answer each question as if you were working in a Unit.

After some question blocks, you will find the answers to check your own progress. In other question blocks the answers have been removed; your instructor will be checking your answers to those questions and problems. Feel free to write in this text, it will be yours to keep for future reference.



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# **BASIC RADIO THEORY**

A radio wave converts the voices (sound waves) into an electrical charge and transmits it into space. Another radio detects the transmitted electronic signal and converts it back to sound waves. Sound waves travel at about 700 miles an hour or take 5 seconds to travel a mile. Radio waves travel at the speed of light or 186,000 miles a second.

Radio Waves are a form of energy called radio-frequency energy (RF). RF moves through space in waves from a positive charge to a negative charge. As RF changes from a positive charge to a negative charge and back to a positive charge, it has moved thru a cycle called a hertz. If it does this a million times a second, it is called one megahertz.



There are three forms of radio waves used by each of us on a daily basis: amplitude modulated (AM) waves, frequency modulated (FM) waves, and digital. AM radio waves are used for public radio broadcasting. They are long waves and can travel for many miles, even up and over mountains, but are subject to noise interference and are not very efficient. AM radio transmitters need a lot of electrical power to work because they vary the power level of their RF to transmit (modulate) the voice transmission. That is why Am radio stations run between 5000 and 50,000 watts of power. AM radios are a lot less expensive to build, but are highly susceptible to noise from power lines, automotive ignition systems, and even sunspots and solar flares.

FM radio systems are less susceptible to noise and use less power. This is why most public service agencies use FM radio systems. FM radios keep the power levels constant and vary the frequency of the radio waves.

The newer radio systems are digital. Instead of modulating the radio signal, digital information in the form of "zeroes" and "ones" are transmitted. Digital signals do not have the same limitations as AM or FM signals.



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There are basically three radio bands used by the fire service. They are:

- Low Band Equipment that used low-band frequencies were used years ago. The longer waves tended to bend a little over hills and up canyons, but lose favor because they skip off the atmosphere and interference from great distances was common. The California Highway Patrol and some local Law enforcement agencies still use Low Band today.
- Very High Frequency-systems that use very high frequencies (VHF) are still very common. Most state and federal wildfire fire agencies use VHF. (CDF is on VHF) The wildland fire agencies are on 150 to 174 MHz frequency range. Radio frequencies in this range do not travel as far as low frequencies, so radio relay(repeaters) are used.
- Ultra-High Frequency- Municipal fire departments use ultra-high frequency(UHF) radio systems. They are much shorter range, but this is compatible with the area they usually protect. Radio waves in this range are absorbed by the vegetative cover, trees brush, etc. 800, 900 MHz (Cell Phones) are in this range. Thus the reason for such poor cell coverage in most mountain areas.

You might hear the new buzz word called "narrow banding". This is a move by the Federal Communications Commission (FCC) to squeeze even more frequencies out of existing allocations. Historically, there were 15 kilocycles. Technology now allows for this gap to be cut to 7.5 kilocycles. The only problem is that with so many different kinds of radios used by the fire service, most of the time the systems are not compatible with each other. The federal wildland fire agencies have all converted to narrow band and the current CDF BK Radio portable and Kenwood mobile are narrowband capable and in fact all CDF air attack frequencies are currently narrow banded with a plan to narrow band everything CDF has in the future.





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# **RADIO EQUIPMENT**

There are three types of radio equipment that firefighters must be familiar with: The base station radio, portable radio, and mobile relay. Dispatchers have the radio console they use.

#### Base Stations

The base radio is like the one in the fire station. It is fixed to a location - not portable. It is usually capable of transmitting and receiving on more than one channel. This radio normally has an alerting device attached to it to alert the firefighters. Command Centers normally have many base stations (called control stations) in the radio vault that are wired to the consoles.

### Mobile Relays

Mobile relays (repeaters) are just what the name implies: they relay transmissions from mobile radios. There sole purpose is to extend the range of the mobile radio (or portable radio) over mountains to gain greater distances. Most repeaters are located on high mountain peaks or on tall water tanks or buildings. To use a mobile relay, you must set the mobile relay to transmit on a specific frequency. The frequency can be used by more than one relay. Example, the TCU unit has 7 repeaters for their local net coverage. All seven repeaters receive AND transmit the SAME frequency pair. The only difference is that each repeater has a unique tone that is associated with the receiver. When you select Tone 1 (110.9 CPS) (Cycles per Second) the repeater that has tone 1 assigned receives the sub-audible tone with your transmission and turns "on" the transmitter. Without this tone the repeater will not turn on the transmitter. This is how we can use multiple repeaters on the same frequency pair.

A repeater has a receive frequency and a transmit frequency. When a mobile, portable or base station transmits thru a repeater, it transmits on the repeaters "receive" side. When the repeater repeats the message, it transmits on the transmit side which is the same as the mobile, portable or base station receive frequency. Note the example on the next page.



### Operations



## Simplex

Simplex operation means the radio waves are transmitted on a frequency that can be received directly by another mobile radio or portable without going thru a repeater. Consider simplex a line-of-sight mode normally used in tactical operations. Mobile relays are normally used to communicate between radios separated by considerable distances, with those that are using low power, or when terrain features make line of sight communications difficult or impossible.

## Portable radios

Portable radios used by CDF are 500 channel programmable and have all frequencies that CDF, and the federal wildland fire agencies use in California as well as a host of local government frequencies. They are 5 watts in power, handheld and are an excellent tool for fireground use as well as capable of operating thru repeaters.



Operations





Operations

# **RADIO NETS**

Under the Incident Command System, there are specific radio nets for certain functions. They are:

- Command
- Tactical
- Support
- Air-to-Air
- Air-to-Ground
- Logistics

The Command Net is used to communicate between the various command and general staff functions down to the Division/Group Supervisor and including the ECC. This is an exclusive channel for command and control communications. It is not for tactical operations.

The tactical nets are used for tactical communications at the Division or Branch level or on the simple Initial Attack incident. The "Tac Net" may be established around agencies, geographical areas or specific functions. The specific frequencies will be listed in the Incident Action Plan (IAP) for larger incidents.

The support net is used for establishing status on an incident or for support of that incident. It can also be called a "Logistics" net on some incidents.

The air-to-ground net is used for communications between the air and the ground. This net is critical when there are many tactical nets in use. It is impossible for Air Attack to monitor ALL tactical nets on a fire so this net is perfect for that use. It is NOT to be used as a ground tactical net between ground units.

Air-to-Air nets are used for aircraft only and are the link between the air tankers, copters and the air tactical officer. This net should never be used by ground forces.

# EMERGENCY COMMAND CENTER Operations

#### RADIO USE PROGRAM TEXT





Operations

## **USING THE MICROPHONE**

There are two common types of microphones used by the Department. One is the hand held microphone like the ones found in most engines (attachable microphone for Handi-Talkie) and the other is the console microphone like the one used in the Emergency Command Center (ECC).

The hand held microphone should be held 1 **INCH FROM THE MOUTH** at a slight angle. The console microphone should be from 4 to 12 inches from the mouth. (If a "noise canceling" type of console microphone, speak with microphone 2" from the mouth.) If they are placed closer, distortion will result. If too far away, voice level will drop off and background noises will cover up the sound, (i.e., siren, pump noise, engine noise). Any form of excitement or shouting will distort your voice and consequently, you will not be understood.

As you prepare to transmit a message, think about what you need to say <u>before</u> you push the transmit button. By thinking about what needs to be said, there will be less "aha" and "umms" before you say something.

Be courteous, answer calls as quickly as possible, and never use profanity on the radio. Not only will your agency come down on you, it is against the law

Be brief and to the point. The radio channel may be clear now, but once fire activity gets heavy, the radio system is the first to be overloaded.

Some key points to remember when using the radio:

- Wait until the person using the radio is finished before you transmit your message.
- When initiating a call, say the station name or unit number of the person you are calling, followed by your station name or unit number.
- Wait a full second after you press the key before you speak.
- Have pencil and paper ready to record information.
- The person who initiates the call closes with the proper radio identification.

Remember that panic and other emotional states are contagious. You should try to **REMAIN CALM ON THE RADIO AT ALL TIMES** so you do not cause problems by exciting other people. Please turn to the next page and answer the questions on use of the microphone.



## USING THE MICROPHONE QUESTIONS

- 1. What two (2) important points were covered in the "Using the Microphone" text section?
  - a.

b.

Turn the page and check your answer, then continue in the text.



EMERGENCY COMMAND CENTER Operations

RADIO USE PROGRAM TEXT

### MICROPHONE ANSWERS

### a. HOLD THE MICROPHONE 1 INCH FROM YOUR MOUTH, AT A SLIGHT ANGLE OR KEEP YOUR MOUTH 4-12 INCHES FROM THE CONSOLE MIKE.

b. **AVOID EXCITEMENT, EMOTION, AND SHOUTING AS THEY DISTORT YOUR VOICE.** 



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# TONES

Tones are used to **activate** mobile relays (repeaters). CDF currently uses **Continuous Tone Coded Squelch System** (CTCSS).

CTCSS is **sub audible** and transmitted as soon as you depress the transmit button on the microphone. This tone is continuously present as long as you are transmitting. CDF has <u>sixteen tones</u> (1-16).

When using frequencies in a car-to-car (direct) mode, tones are not required.

On the next page you will find questions about tones.



Operations

RADIO USE PROGRAM TEXT

## TONE QUESTIONS

- 1. Tones are used to \_\_\_\_\_\_ repeaters.
- 2. CDF uses \_\_\_\_\_ CTCSS tones.
- 3. When transmitting direct, \_\_\_\_\_\_ are not required.

Turn to the next page and check your answers.



# **TONE ANSWERS**

- 1. Tones are used to **ACTIVATE** repeaters.
- 2. CDF uses **16** CTCSS tones.
- 3. When transmitting direct, **TONES** are not required.



Operations

# **MOBILE RELAYS**

Mobile relays (commonly called repeaters) are those radios that are situated on mountaintops and used to extend the range of a mobile or base radio.

They are activated by tones, which are generated by the call initiating radio. This tone is selected by push buttons on mobile radios, or rotary switches on some older radios, by the keypad on handi-talkies, or by pushing one of the tone buttons on a console. Each tone activates a different mobile relay, at a different location or mountaintop.

If more than one frequency is assigned to a mountaintop, such as Mt. Diablo, usually the **same** tone is assigned to each frequency. Example: If Mt. Diablo had 159.385, 159.300, and 159.220, each would be activated by the same tone, such as Tone 1. There are exceptions, but this is the normal practice. The CDF radio system is rapidly changing and assignment of tones to mountain top repeaters in the future on some sites will use multiple tones for different radio nets.

When you select one of the tones and an appropriate frequency, your radio will transmit on one of the repeater control frequencies or so called **transmit frequency**.

If you select a mobile relay tone and transmit on it, the mobile relay hears the tone and turns on simultaneously retransmitting the signal on the direct or **receive frequency**.

It is possible because of distance, interference, and geographic barriers and features that you may not "turn on" or "activate" the repeater you desire. You will know this is the case if you do not hear the two-tone scratching noise (squelch tail) when releasing the transmit button. If this happens, simply select another repeater and its corresponding tone and repeat your transmission or change locations and try again.

Mobile relays used by CDF will turn themselves off or time out after **one** minute of continuous operation to protect the radio from overheating. Each Unit has 5 or more repeaters and CDF command nets use the same set of tones separating the repeaters by long distances so tones can be used by more than one repeater.

On the next page you will find questions about repeaters.



## MOBILE RELAYS QUESTIONS

- 1. Mobile relays are activated by one of \_\_\_\_\_ (CTCSS) tones.
- 2. Mountain tops with more than one frequency usually have all the

frequencies activated by the \_\_\_\_\_\_tone.

- 3. A mobile relay receives the \_\_\_\_\_\_ frequency and transmits on the \_\_\_\_\_\_ frequency.
- 4. Mobile relays will "time out" after \_\_\_\_\_ second(s).

Turn to the next page and check your answers.



## MOBILE RELAYS QUESTIONS

- 1. Mobile relays are activated by one of **16** (CTCSS) tones.
- 2. Mountaintops with more than one frequency usually have all the frequencies activated by the **SAME** tone.
- 3. A mobile relay receives the **REPEATER CONTROL OR TRANSMIT** frequency and transmits on the **RECEIVE OR DIRECT** frequency.
- 4. Mobile relays will "time out" after **60** second(s).



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# DIRECT

When you transmit on "direct" (car-to-car), you are transmitting directly on the **receive** frequency and your signal does not go through a mobile relay (Figure 2). Most CDF ECC's do not have "direct", although air nets are usually transmitted direct.

This limits your signal to **line of sight** and radios on the other side of mountains or other barriers will not usually receive your signal (Figure 2). Do not get the impression, however, that you have a close range, private channel. If you are in a large valley or on a ridge or mountaintop, your signal will go all the way **to the horizon** and any radio that receives the frequency you are on (such as local net) that is between you and the horizon will probably hear your traffic.

Direct should be your **first** choice for routine communications on incidents. This normally limits the amount of long-range traffic in a Unit to the Incident Commander and cuts down on radio interference with other incidents. If direct can work for your communication needs, you should use it.



EMERGENCY COMMAND CENTER Operations

## **DIRECT QUESTIONS**

- 1. Direct signals are transmitted directly on the \_\_\_\_\_\_frequency.
- 2. Describe the range or distance a direct signal can be expected to cover.
- 3. Direct should be your \_\_\_\_\_ choice for any type of communication, especially on incidents.

Turn to the next page, check your answers and continue.



EMERGENCY COMMAND CENTER Operations

## **DIRECT ANSWERS**

- 1. Direct signals are transmitted directly on the **RECEIVE** frequency.
- 2. Describe the range or distance a direct signal can be expected to cover.

## LINE OF SIGHT OR TO THE HORIZON

3. Direct should be your **FIRST** choice for any type of communication, especially on incidents.



# **MESSAGE FORMULATION**

Clear and correct message formation is paramount in getting your point across over the air. Let's now study how to build and communicate a concise message.

There is only one correct way to initiate a call: Announce the **name of the station** (or the unit number) **of the place you are calling first,** followed by **your station name or unit number.** 

Example: Morgan Hill wants to call Belmont - Belmont, Morgan Hill.
Yreka wants to call Engine 2669 - Engine twenty-six sixty-nine, Yreka.
Prevention 4521 wants to call Chief 4500 - Chief forty-five hundred, Prevention forty-five twenty-one.

Preceding each four-digit number you will notice the radio identification plan indicator. (i.e., Engine, Chief, Battalion - See Appendix 3). CDF policy dictates all radio numbers will be preceded with its appropriate radio identification plan indicator.

Notice that the entire four-digit radio number is used in groups of two numbers. The first group of two numbers identifies the Region and Unit. The second group identifies the individual unit and/or unit type .California Department of Forestry and Fire Protection policy states that the entire four-digit number **will always** be used in radio transmission. Do not use the Federal Communication Commission (FCC) assigned call sign when initiating a call

# ENGINE

2	6	69
Area	Unit	Unit Type

When answering a call, answer with your station name or unit number, do not answer GO AHEAD. Do not answer with the name or number of the station calling you. Do not answer with the FCC call sign. If two or more stations or units call you at the same time, answer in the same way you would initiate a call, designating the station or unit you wish to answer.

Example: You are Castle Rock and Morgan Hill has called you. You answer: CASTLE ROCK.
You are Engine 2669 and both Hornbrook and Yreka have called you. You want to
answer Yreka first, your answer: YREKA, ENGINE TWENTY - SIX SIXTY-NINE.



\_\_\_\_\_.

## **MESSAGE FORMULATION QUESTIONS**

1. You are Station 21 and you want to call Perris. Your call should be:

\_\_\_\_\_. Their answer should be:

2. You are Covelo and you are called by Howard Forest. They should have said:

\_\_\_\_\_. You should answer:

3. You are Engine 4581 and you are called by both Camino and Battalion 4514. Camino

should have said: \_\_\_\_\_\_. Battalion

4514 should have said: \_\_\_\_\_\_. You

should answer: \_\_\_\_\_\_. Or:

4. What Area is 2461 from?



## MESSAGE FORMULATION ANSWERS

- 1. You are Station 21 and you want to call Perris. Your call should be: **PERRIS STATION TWENTY-ONE**. Their answer should be: **STATION TWENTY-ONE PERRIS**.
- 2. You are Covelo and you are called by Howard Forest. They should have said: COVELO HOWARD FOREST. You should answer: HOWARD FOREST COVELO.
- 3. You are Engine 4581 and you are called by both Camino and Battalion 4514. Camino should have said: ENGINE FORTY-FIVE EIGHTY-ONE CAMINO. Battalion 4514 should have said: ENGINE FORTY-FIVE EIGHTY-ONE, BATTALION FORTY-FIVE FOURTEEN, ENGINE FORTY-FIVE EIGHTY-ONE. Or: CAMINO ENGINE FORTY-FIVE EIGHTY-ONE.
- 4. What Region is 2461 from?

Operations

## **CALIFORNIA NORTHERN REGION**



Operations

## STRUCTURING MESSAGES

How you structure your message has a great deal to do with whether or not it is understood. Remember that the other party cannot see what you see. It is important that you construct your word pictures carefully. Questions should be asked as questions. A common error is to make a statement that the receiver must confirm or deny.

It is the policy of CDF to use "Clear Text". "Clear Text" used by this Department will be defined as **specific standardized** words and phrases that are understood by **other fire service agencies with which we have contact, as well as CDF**. **These are standardized words and phrases and will be memorized and used**. CDF policy states that **only** "Clear Text" will be used in structuring radio messages and "Clear Text" words and phrases will be used at all times on CDF airways.

Messages should be short, preferably less than 30 seconds long. If your message is longer, consider all alternate methods to sending it by radio, (i.e., telephone, note, green phone, electronic mail, etc.).

CDF policy requires you to break transmission every 30 seconds and wait **NO LESS THAN 10 SECONDS** before continuing. Remember, the primary use of the CDF radio system is for emergency use and such traffic will always take priority!

Breaking a message is done by stopping the message at a convenient point, pronouncing the word "**BREAK**," and releasing the transmit button. After a DELAY OF NO LESS THAN 10 SECONDS, you can continue with the next 30 seconds (or less) of your message. This allows time for someone to get an emergency message through without a lengthy delay.



Operations

RADIO USE PROGRAM TEXT

## STRUCTURING MESSAGES QUESTIONS

- 1. The basic principle of message structure is to \_\_\_\_\_\_.
- 2. The maximum continuous transmission time should be \_\_\_\_\_\_ seconds followed by a

break of \_\_\_\_\_\_ seconds or more.

- 3. Always use \_\_\_\_\_\_, it is designed to reduce airtime.
- 4. Give the correct "Clear Text" phrase used to indicate that a unit is at its station:
- 5. Give two reasons for breaking a message at thirty seconds.
  - a.
  - b.





## STRUCTURING MESSAGES ANSWERS

- 1. The basic principle of message structure is to **KEEP IT SIMPLE**.
- 2. The maximum continuous transmission time should be  $\underline{30}$  seconds followed by a break of  $\underline{10}$  seconds or more.
- 3. Always use **STANDARDIZED CLEAR TEXT**; it is designed to reduce airtime.
- 4. Give the correct "Clear Text" phrase used to indicate that a unit is at it's station:

### IN QUARTERS (THEN STATION NAME OR NUMBER)

5. Give two reasons for breaking a message at thirty seconds.

## a. ALLOW OTHERS WITH A HIGHER PRIORITY TO USE THE RADIO

b. **CDF POLICY REQUIRES IT** 



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# ACKNOWLEDGING MESSAGES RECEIVED

The best way to acknowledge a message is to identify the originator of the message and enough of the text of the message to let the caller know that you heard them and understood the message. This is done by the receiver repeating back the message to the caller.

Example: Engine 1669 responds to a fire. The whole message and response, if properly given would be: MORGAN HILL ENGINE SIXTEEN/SIXTY NINE, RESPONDING. ENGINE SIXTEEN/SIXTY NINE, RESPONDING, FIFTEEN/FORTY-ONE HOURS.

Closure: **ENGINE SIXTEEN/SIXTY-NINE**. (Note: Engine 1669, the originator, closes the net)

Example: Battalion 4514 calls in an order for a part for a training aid: FOUR RESUSCI-ANNES ARE BROKEN AND WE NEED FOUR PART NUMBER ZERO ONE DASH ZERO FOUR DASH ZERO ONE. A good response would be: BATTALION FORTY-FIVE/FOURTEEN, CAMINO, RESUSCI-ANNE PART NUMBER ZERO ONE DASH ZERO FOUR DASH ZERO ONE, TWELVE-FOURTEEN HOURS KMA NINER ONE EIGHT.

Closure: **BATTALION FORTY FIVE-FOURTEEN**. (NOTE: Battalion 4514, the originator, closes the net). While it would sometimes seem that this is time consuming. It actually reduces errors and is time saving in the long run.

It is very necessary to avoid the use of pleasantries such as: please, thank you, conversational use of first names, and the like for they waste air time and result in unprofessional radio use. However, this does **not** mean that the user of the radio should be rude. At times it may be necessary to use pleasantries to calm an excited firefighter for example.

Remember that we are one of the largest fire protection organizations in the world and we should sound professional in our radio usage. The Federal Communications Commission, other agencies and the public monitor us. They all expect us to sound professional; keep messages brief and to the point. You will find that there is more airtime available when these standards are followed.

Lastly, the person who **originates the call** closes the net. This eliminates confusion and lets others know the net is clear for other use.



## ACKNOWLEDGING MESSAGES RECEIVED QUESTIONS

- 1. The best way to acknowledge a message is:
  - a.

b.

- 2. Avoid
- 3. Give an example of a properly structured message, using a unit going in quarters at his/her station, and the proper response and closure. Unit number: Engine 1669; their station: Castle Rock; their headquarters: Morgan Hill





## ACKNOWLEDGING MESSAGES RECEIVED ANSWERS

- 1. The best way to acknowledge a message is:
  - a. **IDENTIFY THE CALLER IN YOUR RESPONSE**
  - b. REPEAT ENOUGH OF THE MESSAGE TO ASSURE THEM YOU RECEIVED IT CORRECTLY
- 2. Avoid THE USE OF PLEASANTRIES
- 3. Give an example of a properly structured message, using a unit going in quarters at his/her station, and the proper response and closure. Unit number: Engine 1669; his/her station: Castle Rock; his/her headquarters: Morgan Hill

## MESSAGE: MORGAN HILL ENGINE SIXTEEN SIXTY-NINE, IN QUARTERS CASTLE ROCK

## ACKNOWLEDGEMENT: ENGINE SIXTEEN SIXTY-NINE, IN QUARTERS CASTLE ROCK TWELVE TWENTY-ONE HOURS KMA TWO-TWO-EIGHT

#### CLOSURE: ENGINE SIXTEEN SIXTY-NINE



# TIPS ON PROPER MESSAGE SENDING & RECEIVING

- 1. Never change a single word in a formal message which is received for relay purposes. Record and retransmit it exactly as given.
- 2. The station sending a formal message to be relayed on the air by the receiving station should monitor the receiving station to verify that the message is retransmitted correctly. Long messages should be broken into phrases and each phrase repeated once before going to the next phrase of the message.
- 3. A receiving operator should not acknowledge a message until they are sure they have copied it correctly. If fill-ins are required, the following form should be used: "Repeat from (last work received) to (first word received after blank)," or, "Repeat all after (the last word received)."
- 4. Use the twenty-four hundred hour time of day at the end of each message and FCC call sign a minimum of once per hour of transmission (current policy states at the end of transmission). This not only helps in complying with FCC regulations but it also will indicate to other waiting stations that you have completed your business. You have signed your station off the air so others waiting may use the channel.
- 5. Your voice should give the distinct impression that you are alert and ready for any contingency. Your reply to a call must be immediate and decisive. Nothing imparts confidence as does an operator whose voice is impersonal and clear. Nothing destroys confidence as does a voice that conveys a lackadaisical and unprofessional attitude.
- 6. Definite time should be specified instead of indefinite; for example; "September 10" instead of "today, date, yesterday, or tomorrow." Definite hour and minute time should also be used, **not**, "a few minutes ago", "in a little while", "later", etc.
- 7. Numbers should be repeated first individually as integers, and then as the whole number. Example: 1,527,617, is transmitted: 1, 5, 2, 7, 6, 1, 7 (pause), then one million, five hundred twenty-seven thousand, six hundred seventeen.

The number "0" is normally pronounced as "zero" except in radio call numbers of vehicles or personnel.

- 8. Numbers are an important part of your message reading, their confusion and miscopying can lead to much trouble, both for your department and others to whom your messages are addressed. The following is the correct pronunciation of numbers:



Operations

#### RADIO USE PROGRAM TEXT

4	-	"FO-WER" With a long O and strong W and final R
5	-	"FIE-YIV" With a long I changing to short and strong Y and V
6	-	"SIKS" With a strong S and KS
7	-	"SEV-VEN" With a strong S and V and well-sounded VEN
8	-	"ATE" With a long A and strong T
9	-	"NIN-ER" With a strong N at the beginning, a long I and a well sounded ER
0	-	"ZERO" With a strong Z and a short RO

- 9. Twenty-four hundred hour time will be used over common 12 hour time. If a person receives a message that has been relayed through several stations advising him/her to meet someone at a certain place at "3 o'clock" the following date, there is a distinct possibility that the person will wonder if the time given is morning or afternoon time. Also, the letters A.M. and P.M. are often misunderstood over the air.
- 10. Do not guess! Check all doubtful words. Never acknowledge a transmission unless you are sure that you have it correct and understand it. If the terminology used in the system you are operating on is unfamiliar to you, learn its meaning.
- 11. Caution should be exercised in attempting to explain or amplify a message given to you to transit. If the person receiving the message indicated doubt as to the meaning of a message repeat the message verbatim. If the person receiving the message is still unable to understand the meaning of the message, refer the message to the originator for clarification.
- 12. Avoid phrases and words that are difficult to copy. Some examples of poor and preferred words are listed:

POOR	PREFERRED
Want	Desire
Can't	Unable
Buy	Purchase
Get	Obtain
Send	Forward
Do you want?	Advise if
Find out	Advise if
Call and see	Check



Operations

13. Dispatching names can be accomplished accurately by first pronouncing the complete name; then spelling the first name, giving the first letter of the name phonetically; then pronouncing the last name and then spelling it phonetically (see phonetic alphabet in Appendix 2).

## **EXAMPLE:**

"John Phares"

"Phares"

"P-Papa"

"H-Hotel"

"A-Alfa"

"R-Romero"

"E-Echo"

"S-Sierra"

Then pronounce the whole name = "John Phares". It is better to spend the extra time required in spelling names clearly since this name could easily have been copied as "Fares" "Farres" or "Ferris" depending upon local pronunciation.

- 14. Reliability is improved in radio/telephone transmissions by good voice control and proper enunciation. Pronounce words clearly and somewhat slowly; a rate of about 60 words per minute is proper.
- 15. Like the military, the words "AFFIRMATIVE" and "NEGATIVE" should be used instead of "yes" and "no". Aircraft pilots also use affirmative and negative because these words are more easily understood when receiving conditions are marginal.
- 16. When you are receiving a message you are to repeat to another person, you should write the message and then read the message to that third person. This eliminates changing the meaning of the original message as often happens when you repeat a message from one person to the next.
- 17. When the message you are sending is complex, you should carefully write it out before you send it, then read it on the radio. This should help keep the message clear, concise and complete.



# **RULES OF RADIO USE**

The rules of radio use are few, and easy to follow. Adhering to these rules will make both routine and emergency air time more available to all users.

- 1. Emergency traffic **always** has priority over routine traffic. Routine traffic should cease until the termination of the emergency.
- 2. RADIO TRAFFIC PRIORITY WILL BE OBSERVED IN THE FOLLOWING ORDER:
  - a. Injury, life hazard, medical aid or the well being of any person.
  - b. **First** report of a **new** emergency.
  - c. Initial attack dispatch to the new emergency.
  - d. Routine traffic
- 3. **Think before pushing the button**. When using the radio, it must be remembered that every message put on the air is received by many people. It is the responsibility of each person using the radio to conduct his or her operations in compliance with the license authorization, which clearly states that such use is primarily for emergency operations: Other transmissions are secondary and must be held to a minimum. Plan your message in advance to save airtime.
- 4. Check carefully before going on the air, to be sure it is not already in use.
- 5. Messages should be brief and to the point.
- 6. "Clear Text" must be memorized and used. This includes the Resource Indicator (Appendix 3), "Clear Text" phrases (Appendix 1), and the International Phonetic Alphabet (Appendix 2). Remember, "Clear Text" must always be used in its **entirety**, avoid using substitutions or partial phrases or words.
- 7. Mayday: International distress signal, all persons receiving a mayday message are obligated **BY LAW** to get message to proper authority. This situation requires complete control of the radio net. **NO** other traffic is allowed until the message is delivered. Obtain the identification of the caller, the nature and location of the emergency, and send the nearest help. Remember, CDF policy states the words "emergency traffic" will be used on CDF airways. Never the less, the CDF radio operators commonly come in contact with other services over the airways, (i.e., CB'ers, other departments, etc.).
- 8. Licensing information: Our license to operate radios clearly states that such operation shall be primarily for emergency use, all other transmissions are secondary and should be held to a minimum. Remember, you are the net control officer for your local net and should control all non-emergency traffic when emergencies exist.



# **RULES OF RADIO USE QUESTIONS**

1. In order of their use, write the four priorities for radio use:

a.

b.

c.

d.

- 2. Why should you "think before pushing the button"?
  - a.

b.

c.


Operations

## **RULES OF RADIO USE ANSWERS**

- 1.. In order of their use, write the four priorities for radio use:
  - a. INJURY, LIFE HAZARD, MEDICAL AID, ETC.
  - b. **FIRST REPORT OF A NEW EMERGENCY.**
  - c. INITIAL ATTACK DISPATCH TO NEW EMERGENCY
  - d. **ROUTINE TRAFFIC**
- 1. Why should you "think before pushing the button"?
  - a. MANY PEOPLE RECEIVE OUR FREQUENCY
  - b. MESSAGES MUST COMPLY WITH LICENSE AUTHORIZATION
  - c. PLANNING MESSAGES SAVES AIR TIME



Operations

## **24-HOUR TIME**

Numbers used for telling time are a special case.

Professional CDF radio operators use the same TIME OF DAY designations, as do the military and other organizations. This system eliminates confusion about A.M. and P.M. times. For example, when it is 1 P.M., you should say "thirteen hundred". Look over this page, and then read this column of time designation aloud.

TIME:	IS WRITTEN AS:	SAY:
1 AM	0100	zero-one hundred
2 AM	0200	zero-two hundred
3 AM	0300	zero-three hundred
4 AM	0400	zero-four hundred
5 AM	0500	zero-five hundred
6 AM	0600	zero-six hundred
7 AM	0700	zero-seven hundred
8 AM	0800	zero-eight hundred
9 AM	0900	zero-nine hundred
10 AM	1000	ten hundred
11 AM	1100	eleven hundred
12 AM NOON	1200	twelve hundred
1 PM	1300	thirteen hundred
2 PM	1400	fourteen hundred
3 PM	1500	fifteen hundred
4 PM	1600	sixteen hundred
5 PM	1700	seventeen hundred
6 PM	1800	eighteen hundred
7 PM	1900	nineteen hundred
8 PM	2000	twenty hundred
9 PM	2100	twenty-one hundred
10 PM	2200	twenty-two hundred
11 PM	2300	twenty-three hundred
12 MIDNIGHT	2400	twenty-four hundred

Notice that you just add 12 to the P.M. time to get the first two numbers of hour as, 8 P.M. is 20 hundred, 8 + 12 = 20.



Now you write the time designations by the regular times below. The first is done for you.

1 AM is: 0100

2 AM is:

3 AM is:

4 AM is:

5 AM is:

6 AM is:

7 AM is:

8 AM is:

9 AM is:

- 10 AM is:
- 11 AM is:

12 Noon is:

1 PM is:

2 PM is:

3 PM is:

- 4 PM is:
- 5 PM is:

6 PM is:

- 7 PM is:
- 8 PM is:
- 9 PM is:
- 10 PM is:
- 11 PM is:
- 12 Midnight is:

Look back at the previous page to check your answers.



Do this page with a partner, if possible, just as the preceding page. This time your partner will read the radio time designations and you will say the regular A.M. and P.M. times. To skip the following section, you must be able to say these correctly within one minute and fifteen seconds. If you are alone, allow yourself two minutes.

PARTNER READS THIS:	AND	CHECKS YOU BY THIS:
17 hundred		5 PM
24 hundred		12 MIDNIGHT
Zero-eight hundred		8 AM
15 hundred		3 PM
10 hundred		10 AM
12 hundred		12 NOON
20 hundred		8 PM
Zero-five hundred		5 AM
22 hundred		10 PM
16 hundred		4 PM
23 hundred		11 PM
13 hundred		1 PM
Zero-five thirty		5:30 PM
Zero-one hundred		1 AM
Zero-three hundred		3 AM
16 hundred		4 PM
Zero-nine hundred		9 AM
14 hundred		2 PM
Zero-seven hundred		7 AM
21 hundred		9 PM
Zero-six hundred		6 AM
18 hundred		6 PM
Zero-four hundred		4 AM
19 hundred		7 PM
Nineteen-fifteen		7:15 PM
Zero-zero-zero-eight		12:08 AM
on first trv	Time o	on second try

Time





**TO BEGIN A MESSAGE**, you should first state the designation of the person you are calling, then your designation (or call sign).

Because the radio you are calling may be listening to more than one net (scan or dual receive switch ON) you should also state the net and tone you are using. Example: "Engine forty five-sixty two, Chief forty five-owe-one, local tone two." Or: "Battalion thirty one-eleven, Perris, CDF2-tone three." Then: **GIVE YOUR MESSAGE**; you should wait for acknowledgment of your message and the other person's designation (or call sign). Then: Give your designation to sign off at the end.

When you are **CALLED**, answer with your designation. When you have received and understood the message, acknowledge it and give your designation to sign off at your end.

Example: Prevention 2722 reporting to the ECC in Camino.

Prevention 2722	Camino
"Camino, Prevention 2722, Local tone one"	"Camino"
"Advise Prevention 2720 that the Local Fire District Investigator will meet him tomorrow at	"Copy, Prevention 2722. What about your meeting at Smith Creek Camp ?.
0900.	
"I'll be there in thirty minutes will report."	"Copy, fourteen twenty three hours."
"Prevention 2722."	



# **TYPES OF MESSAGES**

Message and transmission

Operations

- 1. **Routine message or acknowledgement** Engine 3562 in-service. Voice transmission, routine, and status keeping necessary, record keeping minimal.
- 2. Form message (brief up to 30 seconds with 10 second breaks) requires receiving party to write message down. Must be slower than routine message.
- 3. Formal message Long: Consider alternate method of transmission phone, telecopier, etc.
- 4. Net broadcast No reply necessary weather, etc.
- 5. **Net message** When the dispatcher or a supervisor needs to give the same information to more than one person, they may call all involved at one time. This is called a net message. The persons called should all answer in the order in which they are called. At the end of the transmission, each should sign off in the same order. This order is usually determined in advance and stays the same.

#### NOTE:

When you are in communication, it is not necessary to repeat the caller's designation and your designation with each new transmission. You will have to use your own judgment and common senses in many cases. These designations, phrases, etc., are all designed to help you communicate clearly and briefly. Keep this in mind.



RADIO USE PROGRAM TEXT

## **TYPES OF MESSAGES QUESTIONS**

- 1. Write the correct radio transmission asked for below:
  - a. You are Engine 3360 calling Engine 3382 directly. Write what you would say to call the engine

b. Write what the operator should answer:

- 2. You are Battalion 3111. You have received and understood a message from the dispatcher -Perris - Write what you would say:
- 3. You are Engine 4363. You want to call Engine 4360 working with you on the same fire. You want to call them on LOCAL C/C and ask them if Transport 4341 has arrived at their location. (Remember that Engine 4360's scan switch may be on.) Write how you would call them and how they would answer.
  - YOU

**ENGINE 4360** 

4. The situation is the same as in #3, except that you want to call Engine 4360 using LOCAL NET, TONE 2. Write what you would say and how they would answer.

YOU

**ENGINE 4360** 

Operations

## **TYPES OF MESSAGES ANSWERS**

- 1. Write the correct radio transmission asked for below:
  - a. You are Engine 3360 calling Engine 3382 directly. Write what you would say to call the engine

#### ENGINE 3382, ENGINE 3360

b. Write what the operator should answer:

#### **ENGINE 3382**

2. You are Battalion 3111. You have received and understood a message from the dispatcher -Perris - Write what you would say:

#### PERRIS, BATTALION 3111, COPY

3. You are Engine 4363. You want to call Engine 4360 working with you on the same fire. You want to call them on LOCAL C/C and ask them if Transport 4341 has arrived at their location. (Remember that Engine 4360's scan switch may be on.) Write how you would call them and how they would answer.

YOU ENGINE 4360, ENGINE 4363, LOCAL, DIRECT **ENGINE 4360** 

**ENGINE 4360** 

# HAS TRANSPORT 4341 ARRIVED YOUR LOCATION?

4. The situation is the same as in #3, except that you want to call Engine 4360 using LOCAL NET, TONE 2. Write what you would say and how they would answer.

YOU ENGINE 4360, ENGINE 4363, LOCAL, TONE 2 **ENGINE 4360** 

**ENGINE 4360** 

#### HAS TRANSPORT 4341 ARRIVED YOUR LOCATION?



RADIO USE PROGRAM TEXT

The California Department of Forestry and Fire Protection has three levels of Command and Control:

- 1. Sacramento Command Center
- 2. Northern and Southern Region Operations Centers
- 3. Unit ECC

Operations

The Regional Operational Command Centers are authorized to dispatch personnel and equipment to incidents within their region to the extent of their capabilities. Assistance may be rendered to other agencies in need, or requested and used by the Region in accordance with plans and policy, either on a reimbursement or mutual aid basis.

The Unit Emergency Command Center is authorized to dispatch personnel and equipment to incidents within the Unit to the extent of their capabilities.

Every effort is made to dispatch initial attack forces of sufficient size to ensure prompt control of an incident.



Operations

# **TRAVEL PROCEDURE**

When traveling through the state, it is important that all ECC's involved are kept updated on any changes to the original plans of a responding unit. To alleviate any confusion, the following responsibilities have been adopted. ECC PERSONNEL SHOULD REFER TO HANDBOOK 8110 FOR SPECIFIC RESPONSIBILITIES.

- 1. The sending Unit's Emergency Command Center has the responsibility to provide to responding personnel their assignment, destination, and **order and request number**.
- 2. The sending Unit's ECC and responding personnel will mutually agree on travel route and ETA.
- 3. Responding personnel have the responsibility to notify the requesting Regional Operations ECC when conditions have made it impossible for them to meet their stated ETA, which can adversely affects their assignment.
- 4. It is the responsibility of responding personnel to report any equipment failure that requires a mechanic to the nearest Regional or Unit ECC. This can be done via the California Travel Net on the unit's radio or by telephone.
- 5. Responding personnel should **obtain the order and request numbers** from **their** ECC **prior** to leaving for their destination, this will aid the receiving ECC and any others in keeping accurate accountability of all units in its charge. ECC's should give the order and request number to personnel at time of dispatch.

Operations

# TRAVEL PROCEDURE QUESTIONS

1.	The Unit ECC and
	personnel will mutually agree on a travel route and
2.	have the responsibility to notify the requesting
	ECC when conditions have made it impossible for them
	to meet their stated ETA within a reasonable error of time which can adversely affects their
	assignment.
3.	It is the responsibility of to report any equipment
	failure that requires a mechanic to the Regional Operations
	Center or Unit ECC.

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Operations

EMERGENCY COMMAND CENTER

## TRAVEL PROCEDURE ANSWERS

- 1. The **SENDING** Unit ECC and **RESPONDING** personnel will mutually agree on a travel route and **ETA**.
- 2. **RESPONDING PERSONNEL** have the responsibility to notify the requesting **REGIONAL OPERATIONS CENTER** ECC when conditions have made it impossible for them to meet their stated ETA within a reasonable error of time which can adversely affects their assignment.
- 3. It is the responsibility of **RESPONDING PERSONNEL** to report any equipment failure that requires a mechanic to the **NEAREST** Regional Operations Center or Unit ECC.



Operations

# **INCIDENT/ORDER NUMBER**

#### **Definition**:

An incident is an occurrence where a CDF Emergency Command Center reacts to a situation or initiates an action that requires documentation for further reference.

Emergencies include, but are not limited to, fires, medical aids, life hazard situations, searches, rescues, public assists, smoke checks, false alarms, fire menace standbys, mutual aid, referrals of emergency information to other agencies, law enforcement activities, and requests for equipment and personnel from within CDF's ECC system.

An incident does not need to be an emergency or a commitment of CDF resources. Non-emergency incidents include special staffing patterns, move up of resources for anticipated needs, supplemental aircraft flights and any other action that requires documentation. If the non-emergency activity is because of, or related to, an emergency incident it should be documented against that incident.

#### **Incident Numbering:**

Each incident processed by a CDF ECC will be numbered consecutively beginning with the number "1" at the start of each calendar year. Each ECC will maintain a log of their incidents by number and classified by type.

#### Order Number:

Since each ECC issues its own incident numbers, there are duplicated numbers statewide throughout the year. In order to identify the specific Unit in which the incident occurred, a three-letter alpha identifier will prefix the incident number to create the order number. The alpha identifiers are taken from the "Resource Designation System" Handbook (MACS 410-2).

#### **Reporting Responsibility:**

Each Unit is responsible for reporting all SRA activities within the Unit's administrative area.

#### **Other Agency Orders:**

Other agencies may order resources from CDF on their own number. For those agencies that have a MACS alpha I.D. but do not generate incident numbers, the responsible CDF ECC will make up an order number. For those agencies that do not have a MACS I.D., the responsible CDF ECC will generate a CDF order number and document the agency involved (these will generally be from law enforcement agencies and local government emergency operations centers).

Region offices may elect to use a contract county's incident number or assign an incident number.

Requests must be prefixed with the ordering agency's alpha (MACS) I.D. to notate that agency's



Operations

#### RADIO USE PROGRAM TEXT

accountability for the request unless the requesting agency initiated the original order. When the requesting agency is the order originator, the requests do not need to be prefixed by the alpha identifier.

When a Unified Command is in operation at an incident, the MACS I.D. will be prefixed to the request to indicate which participating agency has fiscal responsibility for the request. The incident's command is required to identify the accountable agency as the request is initiated.

If the Incident Base dispatch function has been delegated, the responsibility of assigning request numbers for an incident must be in close coordination with the ECC administratively responsible for the incident.

At the time an ECC functionalizes its operations due to a major emergency, the next request number will be assigned to each of the sub functions as their initial request number. The sub functions will then add their alpha prefix to that request number and each subsequent request. The sub function prefixes are: A-aircraft; C-handcrews; E-equipment; O-overhead; and S-supplies.

Refer to Appendix B for Order/Request Alpha Identifiers.



EMERGENCY COMMAND CENTER

### **RADIO USE REVIEW QUESTIONS**

Answer the following questions - no handbook reference is necessary.

1. What are alternate methods of a radio transmission?

2. What is the primary use of the CDF radio system?

- 3. What are the four priorities of the CDF radio system?
- 4. What is a "May Day"? What do you do?



RADIO USE PROGRAM TEXT

5. What do you look or listen for before entering a net?

6. How do you answer a radio call?

7. What is a good indicator of poor voice techniques?

8. How often should you "break" a long message?

9. Who ends a communication on the air?



10. What is I.C.S.? What is "Clear text"? 11. 12. Should or could "Clear Text" be modified to fit a situation? Messages should meet what criteria? 13. How should a formal message be relayed? 14.



15. How many inches from the mouth should a hand held mike be held?

16. How many CTCSS tones are used in the CDF repeater system?



Operations

## **RADIO USE REVIEW ANSWERS**

Answer the following questions - no handbook reference is necessary.

1. What are alternate methods of a radio transmission?

#### TELEPHONE, CELL PHONE, FACE TO FACE, NOTES, RUNNERS

2. What is the primary use of the CDF radio system?

#### **EMERGENCY COMMUNICATIONS**

3. What are the four priorities of the CDF radio system?

INJURY, LIFE HAZARD, MEDICAL AID OR THE WELL BEING OF ANY PERSON FIRST REPORT OF A NEW EMERGENCY INITIAL ATTACK TO THE NEW EMERGENCY ROUTINE TRAFFIC

4. What is a "May Day"? What do you do?

# STOP AND LISTEN! SOMEONE AS AN EXTREME EMERGENCY ON THE NET AND NEEDS IMMEDIATE HELP!

5. What do you look or listen for before entering a net?

#### ANYONE USING THE NET.

6. How do you answer a radio call?

#### WITH YOUR PROPER RADIO IDENTIFIER

7. What is a good indicator of poor voice techniques?

#### USING SLANG, POOR WORDS, UNABLE TO COPY THE PERSON

8. How often should you "break" a long message?

#### EVERY 30 SECONDS

9. Who ends a communication on the air?

#### THE person who initiated the call



10. What is I.C.S.?

#### INCIDENT COMMAND SYSTEM

11. What is "Clear text"?

# WORDS AND PHRASES USED IN COMMON LANGUAGE SO ALL CAN UNDERSTAND. NO CODES.

12. Should or could "Clear Text" be modified to fit a situation?

#### YES. AS LONG AS ANYONE CAN UNDERSTAND YOU.

- 13. Messages should meet what criteria?SHORT AND TO THE POINT
- 14. How should a formal message be relayed?

# IF TOO LONG, BREAK EVERY THIRTY SECONDS, USE A CELL PHONE OR WRITE IT DOWN.

15. How many inches from the mouth should a hand held mike be held?

#### 1 INCH

16. How many CTCSS tones are used in the CDF repeater system?

#### <u>16 TONES</u>



# GLOSSARY

#### Aerial:

A mechanically operated turntable ladder attached to a ladder truck and manufactured in various lengths as 65, 76, 85, or 100 ft., aerials.

#### **Aerial Platform Apparatus:**

Operations

Firefighting apparatus having an aerial platform from which streams can be operated into upper floors and which provide means of access to and egress from a building.

#### Airtanker:

Any fixed wing aircraft certified by the FAA as being capable of transport and delivery of fire retardant solutions.

#### Alarm:

Any audible or visible signal or intelligence indicating existence of a supposed fire or emergency requiring response and emergency action on the part of the firefighting service.

#### **Alarm Circuit:**

An electrical signal circuit from the central station to the quarters of various fire companies and agencies to be notified of reports of emergencies and also frequently serving to actuate outside audible alarm devices such as air horns, sirens.

#### **Automatic Alarm:**

An alarm usually actuated by thermostats, sprinkler alarm valves or other automatic services, received over private alarm circuits which may go through an Emergency Command Center and may be received on a separate taper or identified by a special signal.

#### Call Back:

Recall of off-duty personnel back to duty for fires or emergencies. Also, a telephone call from the ECC to the reporting party to obtain additional information.

#### **Clear Text:**

The use of standardized words and phrases in radio communications transmissions. No Ten Codes, or agency specific codes are used when using Clear Text.



#### **Company:**

Any piece of equipment having a full complement of personnel.

#### **Crash Truck:**

Specialized firefighting apparatus designed to handle fires and accidents such as those involving aircraft (airport or airport crash trucks) of vehicles on highways. Such apparatus usually embodies special extinguishing capability for handling large fires involving flammable liquids including foam, carbon dioxide and water spray equipment and also specialized forcible entry and rescue appliances.

#### **Dispatch Level:**

An indicator of the strength of suppression forces to be dispatched to a reported fire. A guide to determining the dispatch level is the best estimate of the level of fire danger at the time of arrival of the forces at the fire.

#### **Dozer Company:**

Any dozer with a minimum complement of two persons.

#### **Emergency Command Center:**

A communication and dispatch center used for the command and control and support of emergency operations.

#### **Emergency Resource Directory:**

A listing of personnel, resources, and facilities available in a geographic area to support emergency operations.

#### **Engine:**

Any ground vehicle providing specified of pumping, water and hose capacity but with less than the specified level of personnel.

#### **Engine Company:**

Any ground vehicle providing specified levels of pumping, water, hose capacity and personnel.



Operations

#### False Alarm:

An incident for which no fire existed of for which fire department response was unnecessary or due to accidental operation of fire alarm devices.

#### Fire:

A usually unintentional or undesired burning, rapid oxidation of combustible materials resulting in light and heat.

#### **Fire Crew:**

Predetermined individuals that are supervised, organized, and trained principally for clearing brush as a fire suppression measure.

#### **Fire Menace Standby:**

Movement of fire service men and equipment to a non-fire incident that has a high probability of a fire starting, i.e., vehicle accidents, flammable liquid spills, power line down, etc.

#### FIREMOD:

A computer program which, with given information, will predict an hourly rate of spread from a point.

#### **Heavy Equipment Transport:**

Any ground vehicle capable of transporting a dozer.

#### Helibase:

A location within the general incident area for parking, fueling, maintenance, and loading of helicopters.

#### **Helitack Crew:**

A crew of three or more individuals who may be assigned to operations or to support helicopter operations.

#### **Incident Commander:**

The individual responsible for the management of all incident operations.



#### **Incident Command Post (ICP):**

That location at which the primary command functions are executed and usually collocated with the incident base.

#### **Incident Command System (ICS):**

The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

#### **Initial Attack:**

Resources initially committed to an incident.

#### Ladder Truck:

A large truck carrying fire department ladders and other equipment. Some ladder trucks are combination units carrying a pump hose, and water tank.

#### Location:

A specifically designated palace to which fire apparatus is dispatched in answer to a report.

#### Medical Aid:

Assistance rendered by fire service personnel to any person who is a victim of mental or physical trauma.

#### **Medical Evacuation:**

The transportation of a sick or injured person to a medical facility.

#### Move-Up:

Movement of fire companies from their home stations to cover vacated stations nearer to a major fire to give coverage to areas stripped of normal protection.

#### **Mutual Aid:**

A form of direct assistance from one fire service to another during a time of emergency.



#### Multi-Agency Coordination System (MACS):

Operations

The combination of facilities, equipment, personnel procedures, and communications integrated into a common system with responsibility for coordination of assisting agency resources and support to agency emergency operations.

#### **NOAA Weather Station:**

A mobile weather data collection and forecasting facility (including personnel) provided by the National Oceanic and atmospheric Administration which can be utilized within the incident area.

#### **Operations Coordination Center (OCC):**

The primary facility of the Multi-Agency Coordination System. It houses the staff and equipment necessary to perform the MACS functions.

#### **Public Service Response:**

Usually a non-emergency response of fire service men and equipment to assist a person, agency, or business, where fire service equipment can solve the problem.

#### Quad:

A "quadruple combination" firefighting apparatus carrying (1) water tank, (2) hose, (3) pump, (4) ladders. Better term is "pumper-ladder" because this unit carries the standard equipment and appliances of both pumper and ladder.

#### **Real Time:**

Actions which must be done at certain times. These are acts which usually are triggered by something else and must be attended to immediately. Example: When the emergency phone rings it must **immediately** be answered.

#### **Radio Cache:**

A cache may consist of a number of portable radios, a base station and in some cases a repeater stored in a predetermined location for dispatch to incidents.

#### **Red Flag Warning:**

An advisory of the likelihood of dangerous fire weather conditions in an area described in the advisory. It is issued by the fire weather forecaster as far in advance as possible, hopefully 72 hours.



#### **Rescue:**

The saving of a life endangered by fire or accident. Generally employed in the sense of assistance to persons unable to help themselves, although loosely used to describe assistance rendered to persons in danger or trouble.

Prompt action in freeing someone or something from imminent damage or destruction.

#### **Response Card:**

A card showing fire company assignments for a given response area or location on various alarms from first to third. Beyond that equipment is usually specially called. The card includes outside companies responding under mutual aid.

#### Search:

The effort to locate an objective or person in distress, without subsequent location/recovery.

#### **Serious Injury:**

Any injury or illness occurring which requires in-patient hospitalization for a period in excess of 24 hours for other than medical observation, or in which an employee suffers loss of any member of the body or any serious degree of permanent disfigurement.

#### **Serious Vehicle or Property Accident:**

Accident involving extensive property damage to vehicles or real property in excess of \$3,000.

#### Snorkel:

Name given to hydraulically operated elevating platform fire apparatus by Fire Commissioner Robert Quinn of Chicago.

#### **Staging Area:**

That location where incident personnel and equipment are assigned on a three (3) minute available status.

#### Station:

A fire department station or quarters in which on-duty personnel and equipment are housed.



Operations

#### Task Force:

A group of resources with common communications and a leader temporarily assembled for a specific mission.

#### **Triple Combination:**

A combination pumping engine combing hose, water tank, and pump apparatus.

#### Truck:

A fire department ladder truck carrying a large inventory of tools and equipment essential and useful in rescue, firefighting and emergency work.

#### **Truck Company:**

A ladder truck company with special reference to the large assortment or special emergency tools carried and the crew of men skilled in their use.

#### Water Tender:

Any ground vehicle capable of transporting specified quantities of water.



## **APPENDIX B**

### **Order/Request Alpha Identifiers**

### CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION

#### Sacramento

CDF - Sacramento Headquarters

CFA - Fire Academy

#### **California Northern Region**

- CNR California Northern Region
- CZU San Mateo/Santa Cruz Unit
- HUU Humboldt/Del Norte Unit
- LNU Sonoma-Lake/Napa Unit
- MEU Mendocino Unit
- SCU Santa Clara Unit
- BTU Butte Unit
- LMU Lassen/Modoc Unit
- NEU Nevada/Yuba/Placer Unit
- SHU Shasta/Trinity Unit
- SKU Siskiyou Unit
- TGU Tehema/Glenn Unit
- AEU Amador/Eldorado Unit

#### **California Southern Region**

- CSR California Southern Region
- BDU San Bernardino Unit
- MVU San Diego Unit
- RRU Riverside Unit
- SLU San Luis Obispo Unit



- BEU San Benito Monterey Unit
- FKU Fresno/Kings Unit
- MMU Madera/Mariposa/Merced Unit
- TCU Tuolumne/Calaveras Unit
- TUU Tulare Unit

#### **Contract Counties**

- MRN Marin County Fire Department
- LAC Los Angeles County Fire Department
- ORC Orange County Fire Authority
- SBC Santa Barbara County Fire Department
- VNC Ventura County Fire Department
- KRN Kern County Fire Department

### **UNITED STATES FOREST SERVICE**

#### North Zone

- ONC Operations North California North Zone Dispatch
- ENF El Dorado National Forest
- KNF Klamath National Forest
- LNF Lassen National Forest
- MDF Modoc National Forest
- MNF Mendocino National Forest
- PNF Plumas National Forest
- SHF Shasta/Trinity National Forest
- SRF Six Rivers National Forest
- TMU Lake Tahoe Basin Management Unit
- TNF Tahoe National Forest

#### South Zone

#### OSC – Operations Southern California – South Zone Dispatch



Operations

- ANF Angles National Forest
- BDF San Bernardino National Forest
- CNF Cleveland National Forest
- INF Inyo National Forest
- LPF Los Padres National Forest
- SNF Sierra National Forest
- SQF Sequoia National Forest
- STF Stanislaus National Forest



Operations

# CDF CLEAR TEXT WORDS AND PHRASES

Words and Phrases	Application
Unreadable	Used when signal received is not clear. In most cases, try to add the specific trouble. Example: "Unreadable, background noise."
Loud and Clear	Self explanatory
Stop Transmitting	Self explanatory
Copy, copies	Used to acknowledge message received. Unit radio identifier must also be used. Example: "Engine 2675, copies."
Affirmative	Yes
Negative	No
Respond, responding	Used during dispatch – proceed to or proceeding to an incident. Example: "Engine 1476, respond" or "St. Helena, Engine 1476 responding."
Enroute	Normally used by administrative or staff personnel to designate destinations. Enroute is not a substitute for responding. Example: "Redding, Chief 2400 enroute Northern Operations Center."
In-quarters, with station name or number	Used to indicate that a unit is in a station. Example: "Morgan Hill, Engine 1677 in quarters, Sunol."
Uncovered	Indicates a unit in not in service, because there are no personnel to operate it.
Out-of service	Indicates a unit is mechanically out of service. Example: "Perris, Transport 3141, out-of- service." Note, when repairs have been completed the following phrase should be used: "Perris, Transport 3141, back in service, available."



Words and Phrases	Applications
In-Service	This means that the unit is operating, not in response to a dispatch. Example: "Fortuna, Engine 1283, in-service, LE 38 inspection."
Repeat	Self-explanatory
Weather	Self-explanatory
Return to	Normally used by ECC to direct units that are available to a station or other location.
What is your location?	Self-explanatory
Call by phone	Self-explanatory
Disregard last message	Self-explanatory
Stand-by	Self-explanatory
Vehicle registration check	Self-explanatory
Is available for a phone call?	Self-explanatory
At scene	Used when units arrive at the scene of an incident. Example: "Perris, Engine 3183, at scene."
Available	Used when a unit is ready for a new assignment or can return to quarters. The ECC will give the unit a new assignment or direct it to return to quarters. Example: "San Luis, Cuesta Crew 2 availale." "Cuesta Crew 2 return to Cuesta."
Available at scene	Used when a unit is still committed to an incident, but could be dispatched to a new emergency if needed.
Available at residence	Used by administrative or staff personnel to Indicate they are available and on-call at their Residence.



Operations

Words and Phrases	Application
Can handle	Used with the amount of equipment needed to handle the incident. Example: "Susanville, Battalion 2212, can handle with units now at scene."
Burning operation	Self-explanatory
Report on conditions	Self-explanatory
Fire under control	Self-explanatory
Emergency traffic only	Radio users will confine all radio transmissions to an emergency in progress or a new incident. Radio traffic which includes status information such as, responding, reports on conditions, at scene and available will be authorized during this period.
Emergency traffic	Term used to gain control of radio frequency to report an emergency. All other radio users will refrain from using that frequency until cleared by ECC.
Resume normal traffic	Self-explanatory.



# **APPENDIX D**

# PHONETIC ALPHABET AND NUMERICAL PRONUNCIATIONS

Due to interference or a poor signal, it may be necessary at times to use a name for the letter in order to complete the transmission. Under ordinary circumstances, phonetic spelling of a full name will not be necessary.

A – Alfa	J- Juliet	S- Sierra
B – Bravo	K – Kilo	T – Tango
C- Charlie	L – Lima	U – Uniform
D – Delta	M – Mike	V – Victor
E – Echo	N – November	W – Whiskey
F – Foxtrot	O – Oscar	X – X-Ray
G – Golf	P – Papa	Y – Yankee
H – Hotel	Q – Quebec	Z - Zulu
I – India	R – Romeo	

Transmit numbers singly and in groups. Give each number individually and then repeat the whole, grouping them into two's and three's. Use the standard numerical pronunciation as follows:

1 - Won	6 – Siks
2 – Too	7 – Sev- ven
3 – Th-r-ee	8 – Ate
4 – Fo-wer	9 – Nine-er
5 – Fie-yiv	0 – Zero (never say "Owe")



EMERGENCY COMMAND CENTER

## **APPENDIX E**

# **RADIO IDENTIFICATION PLAN**

All personnel using the CDF radio system will use standardized radio identifiers. Identifiers are assigned to a uniform and systematic manner to identify administrative personnel, special functions and certain categories of firefighting resources within the Department. Standardized identifiers also are used to increase the efficiency and the effectiveness and the Department's communication system.

The radio identifiers consist of numbers or alphanumeric combinations preceded by an appropriate descriptive indicator (see below).

The descriptive indicators will be used statewide for all radio traffic.

## INDICATORS FOR PERSONNEL AND EQUIPMENT RESOURCES

INDICATOR	RESOURCE
"Air Tactical"	Utility Aircraft
"Battalion"	Battalion Chief
"Chief"	Deputy Chief and above
"Division"	Division Chief
"Copter"	Helicopter
"Crew"	Fire Crew
"Crew Transport"	Crew Carrying Vehicle
"Dispatch"	Command Center Personnel
"Dozer"	Bulldozer
"Dozer Tender"	Bulldozer Service Unit
"Engine"	Fire Engine, Pumper, 50 gpm minimum
"Engineering"	Construction and Maintenance Personnel
"Forester"	Resource Management Personnel



Operations

"Helitack"	Helitack Crew
"Helitender"	Helitack Service Unit
"Patrol"	Pickup pumper, 15 gpm minimum
"Prevention"	Fire Prevention Personnel and Equipment
"Repair"	Equipment Maintenance Personnel and Equipment
"Supply"	Material Management and Service Center Personnel and Equipment, including Stakesides
"Tanker"	Airtanker
"Training"	Training Officer
"Transport"	Bulldozer Transport
"Transport/Dozer"	Bulldozer with Transport
"Utility"	Utility Vehicle, recon vehicle
"Water Tender"	Water Tank Truck, 1000 gal. Minimum

The following terms are used with the appropriate local government contract equipment

"Ambulance"	Emergency vehicles intended primarily for patient transport
"Crash"	Specialize airport fire protection
"Medics"	Paramedics
"Salvage"	Vehicles equipped to support salvage and overhaul operations
"Squad"	Vehicles equipped to support rescue/extrication operations (with or without pumping capability)


EMERGENCY COMMAND CENTER

"Support" Specialized unit that may carry extra hose, firefighting hand tools, breathing apparatus, or capable of refilling breathing apparatus "Truck" Any apparatus outfitted with an aerial ladder, snorkel, telesquirt, etc.

These indicators will be used for all radio transmissions except when the individual or resource is assigned to a position on an incident using the Incident Command System. The individual or resource then will use the ICS radio call indicator assigned to that position.

When a vehicle or handie-talkie is used by an individual other than the person normally assigned, the terms "Unit" or "HT" will be used with the numerical identifier, instead of the indicator listed above.



#### UPDATING THE RADIO IDENTIFICATION AND DICTATOR CODE PLAN

The Sacramento Emergency Command Center will be responsible for updating and distributing the Radio Identification and Dictator Code Plan for Sacramento personnel.

#### STANDARDIZED CALL SIGN (IDENTIFIER) FOR SACRAMENTO OFFICE

OFFICE

Sacramento Headquarters

CALL SIGN

Sacramento

#### RADIO IDENTIFICATION PLAN FOR CDF HEADQUARTERS, CALIFORNIA NORTHERN REGION (CNR) AND CALIFORNIA SOUTHERN REGION (CSR).

CDF HEADQUARTERS	SERIES
Sacramento	500 - 599
Academy	5500 - 5599
CNR	SERIES
Operations	100 – 299
CSR	SERIES
Operations	300 - 499

#### RADIO IDENTIFICATION PLAN FOR CNR AND CSR OPERATIONS EMERGENCY COMMAND CENTERS

OFFICE	CALL SIGN
California Northern Region Operations	North Ops
California Southern Region Operations	South Ops

EMERGENCY COMMAND CENTER

Operations

#### **RADIO IDENTIFICATION PLAN FOR UNITS**

## **California Northern Region**

Unit	Series
Mendocino	1100 – 1199
Humboldt/Del Norte	1200 - 1299
Sonoma – Lake/Napa	1400 - 1499
Santa Clara	1600 - 1699
San Mateo/Santa Cruz	1700 – 1799
Butte	2100 - 2199
Lassen/Modoc	2200 - 2299
Nevada/Yuba/Placer	2300 - 2399
Shasta/Trinity	2400 - 2499
Tehama/Glenn	2500 - 2599
Siskiyou	2600 - 2699
Amador/El Dorado	2700 - 2799

### **California Southern Region**

Unit	Series
Riverside San Diego	3100 - 3199 3300 - 3399 2400 - 2400
San Luis Obispo San Bernardino	3400 – 3499 3500 – 3599
Tulare	4100 - 4199
Madera/Mariposa/Merced	4200 - 4299
Fresno/Kings	4300 - 4399
Tuolumne/Calaveras	4400 - 4499
San Benito/Monterey	4600 - 4699

EMERGENCY COMMAND CENTER

Operations

## STANDARDIZED CALL SIGNS (IDENTIFIERS) FOR UNIT - HEADQUARTERS California Northern Region

<u>UNIT</u>	CALL SIGN
Humboldt/Del Norte	Fortuna
Mendocino	Howard Forest
Sonoma-Lake/Napa	St. Helena
Santa Clara	Morgan Hill
San Mateo/Santa Cruz	Felton
Siskiyou	Yreka
Lassen/Modoc	Susanville
Shasta/Trinity	Redding
Tehama/Glenn	Red Bluff
Butte	Oroville
Nevada/Yuba/Placer	Grass Valley
Amador/El Dorado	Camino

## **California Southern Region**

Tuolumne/Calaveras	San Andreas
Madera/Mariposa/Merced	Mariposa
Fresno/Kings	Fresno
Tulare	Visalia
San Benito/Monterey	Monterey
San Luis Obispo	San Luis
San Bernardino/Owens Valley	San Bernardino
Riverside	Perris
San Diego	Monte Vista



## **RADIO IDENTIFICATION PLAN FOR UNIT PERSONNEL AND EQUIPMENT**

The "XX" shown is for the unit number. Example: Shasta-Trinity Unit Chief would be C2400

POSITION/FUNCTION	VEHICLE RADIO ID	RADIO CALL SIGN
Unit Chief	CXX00	Chief XX00
Deputy Chief (includes Forester III's)	CXX01 – 99	Chief XX01, etc
Division Chief (Assistant/Forester II's)	DXX01 – 99	Division XX01, etc
Battalion Chief (Field/Staff/Prevention)	BXX01 – 99	Battalion XX01, etc
Fire Prevention (Capts/FPA's/Other)	PXX01 – 99	Prevention XX01, etc
Command Center (Capts/Clerks/Other)	CCXX01 – 99	Dispatch XX01, etc
Resource Management (Forester 1's)	FXX01 – 99	Forester XX01, etc
Training (Capts/Other)	TXX01, 99	Training XX01, etc
Administrative (Capts/Other)	AXX01 – 99	Admin XX01, etc
Mobile Equipment (FEM's/HEM's/Mech)	RXX01 – 99	Repair XX01, etc
Service Center BSO's/FLO's/Other)	SXX01 – 99	Supply XX01, etc
Engine	XX01 – 99 (NOTE: The engine number series XX50 – XX69 is reser for 4WD engines.)	Engine XX01, etc ved



#### STANDARDIZED CALL SIGN FOR FIRE CREWS

Fire crews will use the same name and assigned crew number as their identifier. Example: "BASELINE CREW #2."

#### **RADIO IDENTIFICATION PLAN FOR AIRCRAFT**

AIRTANKERS will use the indicator "Tanker" plus the 2 or 3-digit numbers assigned by the Interagency Airtanker Board. Example: For Airtanker 42, the proper radio identifier is "Tanker four-two" (not forty-two).

HELICOPTERS will use the indicator "Copter" plus a 3-digit number. The first digit identifies the Region assignment, the second digit identifies the Unit assignment, and the third digit indicates whether the aircraft is a primary or secondary aircraft. A "zero" will be used for the primary attack and "one" through "nine" for the secondary aircraft. Example: For the primary helicopter assigned to the Mendocino Unit, the proper radio identifier is "Copter one-zero-one".

UTILITY AIRCRAFT will use the indicator "Air Tactical or TAC" plus a 3-digit number. The first digit identifies the Region assignment, the second digit identifies the Unit assignment, and the third digit indicates whether the aircraft is a primary or secondary air attack. A "zero" will be used for the primary attack and "one" through "nine" for secondary aircraft. Example: For the primary utility aircraft assigned to the Sonoma-Lake/Napa Unit, the proper radio identifier is "Air Attack one-four-zero".

# RADIO IDENTIFICATION PLAN FOR LOCAL GOVERNMENT CONTRACT PERSONNEL AND EQUIPMENT

A Unit that faces compaction problems with the 4-digit numbering system will develop a radio identification plan for county or district owned resources that meets local needs and is consistent with the CDF Radio Identification Plan. This plan will be submitted to Sacramento, through channels, after approval by CNR or CSR. Schedule "B" resources will retain their radio identifiers at all times, even though they may be used as part of a local government contract.

#### ASSIGNMENTS AND PLANS TO BE UPDATED ANNUALLY

Each Operations Command Center Chief will ensure that the Radio Identification Assignments and Plans for the Administrative and Operations office, each Unit, and all other CDF functions within their area are currently up to date and distributed to everyone concerned by April 15 of each year.

#### COPIES OF PLANS TO BE SUBMITTED TO SACRAMENTO

One copy of each CNR and CSR radio plan (including all CDF and local government contract personnel and equipment) will be submitted to the Sacramento ECC no later than May 1 of each year.



# **MULTI-AGENCY COORDINATION SYSTEM**

## RESOURCE DESIGNATION SYSTEM MACS 410-2

November 17, 2000

This document contains information relative to the Incident Command System (ICS) component of the National Interagency Incident Management System (NIIMS). This is the same Incident Command System developed by FIRESCOPE.

Additional information and documentation can be obtained from the following sources:

OES FIRESCOPE OCC Document Control 2524 Mulberry Street Riverside, CA 92501-2200 (951) 782-4174 Fax (951) 782-4239 www.firescope.org

The information contained in this document has been approved by the State Board of Fire Services and the Fire and Rescue Service Advisory Committee/FIRESCOPE Board of Directors for application in the statewide Fire and Rescue Mutual Aid System.

This material is a development of the FIRESCOPE Program.

## CONTENTS

Contents1
Background2
Basic System Design
Definition Of Terms2
Forming And Designating Strike Teams And Task Forces4
Assigning Strike Team/Task Force Numbers5
Strike Team Examples6
Assigning Task Force Designations9
Format - Restat Information - Strike Team Or Task Force9
Reassigning Resources
Use Of Sequential Numbers10
APPENDIX A - Mutual Aid Region Designators And Number ListingA-1
APPENDIX B - California Department Of Forestry Statewide Number ListingB-1
APPENDIX C - United States Forest Service Statewide Number Listing C-1
APPENDIX D - United States Department Of Interior Statewide Number Listing D-1
APPENDIX E - Three-Letter Identifier Alphabetical By Agency Name E-1
APPENDIX F - Operational Area IdentifiersF-1

## BACKGROUND

In order to rapidly and accurately identify grouped (Strike Team - Task Force) resources used on multiagency incidents throughout California, it is necessary to have a standard resource designation system. To ensure standardized training and use, this system will be included in both MACS and ICS procedures.

The Resource Designation System described in this document is the result of intensive research and testing by the FIRESCOPE Program. The system is designed to meet current and projected statewide needs.

## BASIC SYSTEM DESIGN

The system is based upon the application and combined use of:

- Three (3) letter designators for individual agencies and mutual aid operational areas.
- Four (4) digit "block numbering" for six (6) mutual aid regions with sub-blocks for operational areas and agencies capable of fielding grouped resources.
- Permanently assigned block numbers will allow for identification of mutual aid region, operational area or single agency, and numbering of grouped resources without duplication of numbers.
- Alphabetical lettering is used to identify kind and type of Strike Teams.
- System is compatible with manual or electronic format.

## **DEFINITION OF TERMS**

<u>Single Resources</u> – A single increment of any resource, considered fully operational when it has minimum numbers of personnel, equipment, etc. <u>Example</u>: A single crew, engine, dozer, helicopter, etc.

<u>Task Force</u> - A Task Force is a group of resources with common communications and a leader. Task Forces formed by agency or area dispatch centers will be designated from block numbers. If formed at the incident, they will be designated by incident name (i.e., "Sage TF 1"). Task Forces will be disassembled when the need no longer exists.

<u>Strike Team</u> – A Strike Team is a group composed of a set number of the same kind and type of resources, with common communications and a leader. Strike Teams may be assembled by a Regional Fire and Rescue Coordinator, Operational Area Fire and Rescue Coordinator, agency dispatch centers or at the incident. Strike Teams will be released when no longer needed and returned as a unit to the incident, area or department from which they were formed.

<u>Three-Letter Designators</u> – The three-letter designator is used to identify individual agencies or operational areas dispatching resources. All fire departments, agencies and mutual aid operational areas in California have been assigned a three-letter designator.

<u>Resource Numbers</u> – Numbers assigned to resources for ease of tracking and communication. Numbers will define resource type and configuration.

<u>Single Resources</u> - Single Resources will always use their agency assigned equipment number or in the case of a crew, it may be a crew name and number.

<u>Strike Teams</u> - Strike Teams will be assigned numbers from a block of numbers preestablished for each operational area or agency. These numbers will be assigned sequentially.

<u>Mutual Aid Regions</u> - The 58 counties in California are divided into six (6) mutual aid regions. Such regions are common to all emergency services. Each has a designated Region Fire and Rescue Coordinator and dispatch center.

<u>Operational Area (Mutual Aid Area)</u> – Each county in California is an "Operational Area" with a designated Fire and Rescue Coordinator. EXCEPTIONS: (1) Los Angeles County has six (6) operational areas identified alphabetically; (2) Tahoe Basin Operational Area includes parts of three counties in California and parts of three counties in Nevada.

<u>California Department of Forestry and Fire Protection Administrative Regions</u> - The California Department of Forestry and Fire Protection has divided the State into two geographic regions, four areas, and twenty-one (21) ranger units. CDF will assign radio numbers to be used with their three-letter identifier to designate their resources.

## FORMING AND DESIGNATING STRIKE TEAMS AND TASK FORCES

Strike Teams or Task Forces can be formed and designated in the following ways:

By a single agency (agency owned resources) - The agency three-letter designator will precede agency's block number.

<u>Mixed Agency</u> - Local resources formed by Operational Area Fire and Rescue Coordinators will be designated with respective operational area three-letter identification and block number. NOTE: Mixed Federal and State Forestry resources may be designated by either agency. (A discretionary decision.)

<u>State OES Resources</u> - These will be formed and designated by Operational Area or Region Fire and Rescue Coordinators. Three-letter "OES" designator will precede block numbers. NOTE: <u>OES and local resources should not be mixed</u>.

<u>Mixed Operational Area</u> - Local resources formed from two (2) or more operational areas will be designated with the three-letter identifier and a block number of the operational area from which the leader is selected or the operational area from which the greatest number of component resources are supplied.

<u>Out-of-State/Private Resources</u> - Resources imported from out-of-state, (i.e., federal agencies or private resources) will be designated by the agency that procures them.

By a Combination of Administrative Units within same agency:

- <u>California Department of Forestry and Fire Protection</u> Combined resources of two (2) or more ranger units will be identified by the CDF region office and assign numbers.
- <u>U.S. Forest Service</u> Combined resources of two (2) or more forests will be identified by the forest forming the strike team using its designator and block numbers.
- <u>State Office of Emergency Services</u> OES or local resources formed from two (2) or more mutual aid regions will be identified by Sacramento OES Headquarters with OES designator and block numbers.

<u>At the Incident</u> - Strike Teams or Task Forces assembled at the incident will be identified by incident name, for radio call, and sequentially numbered beginning with 1 (one).

## ASSIGNING STRIKE TEAM/TASK FORCE NUMBERS

The Resource Designation System utilizes the block numbering concept. All numbers include four (4) digits followed by a single letter (i.e., 1234-A). Numbers and letter indicate: mutual aid region, agency or operational area, individual group numbers, kind and type resources. NOTE: <u>Circumstances dictate a modification for CDF – see second example below</u>.

**BLOCK NUMBERS** - The six (6) mutual aid regions will consist of six blocks of 1000 numbers each:

Example: Mutual Aid Region I - 1000 to 1999.

Sub-blocks (i.e., 1000 to 1099) may be assigned to operational area or large single agency such as L.A. City F.D. thus, four (4) digits reflect:

LFD	<u>1</u>	<u>0</u>	<u>01</u>	<u>A</u>
area or	region	area or	Grouped	kind and
agency		agency	res. no.	type

Any series of numbers within a region block becomes synonymous with the area or department to which it is assigned.

**BLOCK NUMBERS** (California Department Of Forestry And Fire Protection)

Because CDF utilizes a four (4) digit resources numbering system on a daily basis within its administrative regions, mutual aid region block numbers might be duplicated. Thus, CDF will utilize a modified block number in the 9000 series statewide. <u>Example</u>: 9100 - 9199 block assigned to CDF Coast Area.

<u>CDF</u>	<u>9</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>C</u>
Agency	CDF	CDF Area	Ranger	Grouped	kind and
			Unit	res. no.	type

NOTE: CDF region will assign block numbers to individual ranger units. CDF will utilize blocks 9100, 9200, 9300, and 9400 for their area designation. This leaves 9000, and 9500 through 9900 blocks not allocated.

## STRIKE TEAMS ALPHABETICAL LETTERING - KIND AND TYPE

Kind and type of resources (identified in ICS 020-1 Resource Designation Listing) are identified by a single letter following block numbers, (i.e., LFD ST 1001-A).

Α.	Engine type 1	G.	Crew type 1	K.	Dozer type 1
В.	Engine type 2	Η.	Crew type 2	L.	Dozer type 2
C.	Engine type 3	Ι.	Reserved	Μ.	Dozer type 3
D.	Engine type 4	J.	Reserved	N.	Reserved
E.	Reserved			О.	Reserved
F.	Reserved				

<u>P. through Z</u>. Not assigned - reserved for expansion.

AR. US&R Company type 1	GR. US&R Crew type 1
BR. US&R Company type 2	HR. US&R Crew type 2
CR. US&R Company type 3	IR. US&R Crew type 3
DR. US&R Company type 4	JR. US&R Crew type 4

**THREE-LETTER DESIGNATOR VS. RADIO CALL SIGN** - The primary purpose of the three-letter designator is to identify agency or area resources.

EXAMPLE: Recorded Designator: XOR ST 1400-A Radio Call: "Orange area strike team fourteen hundred-ALPHA"

> Recorded Designator: OES ST 1800-A Radio Call: "OES strike team eighteen hundred-ALPHA"

#### STRIKE TEAM EXAMPLES

#### SINGLE AGENCY STRIKE TEAMS

<u>Resources</u> - Engines Type 3 from San Bernardino National Forest. <u>Three Letter Designator</u> - BDF <u>Number</u> - 6601 <u>Kind-Type</u> - C (Engine type 3) <u>Resource Designation Format</u> - BDF ST 6601-C <u>Radio Call</u> - "San Bernardino Forest Strike Team sixty-six zero one "CHARLIE" <u>Number Assigned By</u> - San Bernardino National Forest.

#### OES STRIKE TEAMS

<u>Resources</u> -Engines Type 1, all OES owned equipment from Mutual Aid Region I. <u>Three Letter Designator</u> - OES <u>Number</u> - 1801 <u>Kind-Type</u> - A (Engine type 1) <u>Resource Designation Format</u> - OES ST 1801-A <u>Radio Call</u> - "OES Strike Team eighteen zero one ALPHA " <u>Number Assigned By</u> - Region I Fire and Rescue Coordinator.

#### MIXED AGENCY STRIKE TEAMS FROM SAME MUTUAL AID AREA

<u>Resources</u> - Engines Type 1, from Ventura County Mutual Aid Area Region I. <u>Three-Letter Designator</u> - XVE <u>Number</u> - 1551 <u>Kind-Type</u> - A (Engine type 1) <u>Resource Designation Format</u> - XVE ST 1551-A <u>Radio Call</u> - "Ventura Area Strike Team fifteen fifty one ALPHA" Number Assigned By - Ventura County Operational Area Fire and Rescue Coordinator.

#### DIFFERENT MUTUAL AID AREAS WITHIN A MUTUAL AID REGION

Resources - 3 Engines type 1, from Los Angeles Co. Operational Area 'A'. (Region I) 2 Engines type 1, from other Los Angeles Co. Operational Areas (Region I). <u>Three-Letter Designator and Number</u> – Would be determined by the Region and Operational Area Fire and Rescue Coordinators involved.

<u>Number</u> - 1075 <u>Kind-Type</u> - A (Engine type 1) <u>Resource Designation Format</u> - XLA ST 1075-A <u>Radio Call</u> - "Area A Strike Team ten seventy five ALPHA"

## DIFFERENT ADMINISTRATIVE UNITS (SINGLE AGENCY)

USFS and CDF Strike Teams may be formed from more than one forest or CDF administrative unit. Such a combination would not be considered mixed agency resources.

## U.S. Forest Service

Resources - 3 Engines type 3, from the Angeles National Forest. 2 Engines type 3, from the San Bernardino National Forest. Three-Letter Designator - ANF Number - 1601 Kind-Type - C (Engine type 3) Resource Designation Format - ANF ST 1601-C Radio Call - "Angeles Forest Strike Team sixteen zero one CHARLIE" Number Assigned By - Angeles National Forest

#### California Department of Forestry and Fire Protection

Resources - 3 Engines type 3, from the Riverside Ranger Unit 2 Engines type 3, from the San Diego Ranger Unit Three-Letter Designator - CDF Number - 9310 Kind-Type - C (Engine type 3) Resource Designation Format - CDF ST 9310 C Radio Call - "CDF Strike Team ninety-three ten CHARLIE" Number Assigned By -CDF Riverside Ranger Unit with Region Office coordination

## **INCIDENT FORMED STRIKE TEAMS**

Resources - 1 Dozer type 2, privately owned 1 Dozer type 2, from L.A. Co. F.D. 1 Dozer tender, from Santa Barbara Co. F.D. Three-Letter Designator - "CREST" (Incident Name) <u>Number</u> - 1 <u>Kind-Type</u> - L (dozer type 2) <u>Resource Designation Format</u> - CREST ST 1-L <u>Radio Call</u> - "Crest Strike Team One LIMA" <u>Number Assigned By</u> - Resources Unit at the "Crest" incident

#### **ASSIGNING TASK FORCE DESIGNATIONS**

#### AGENCY FORMED TASK FORCE

Resources - 1 Engine type 1, from L.A. Co. F.D. 1 Dozer type 2, from L.A. Co. F.D. 1 Crew type 1, from L.A. Co. F.D. Three-Letter Designator - LAC <u>Number</u> - 1102 <u>Resource Designation Format</u> - LAC TF 1102 <u>Radio Call</u> - "L.A. County Task Force eleven zero two" <u>Number Assigned By</u> - Los Angeles County Dispatch

#### INCIDENT FORMED TASK FORCE

Resources - 1 Engine type 1, from LAC 1 Engine type 1, from LFD 1 Dozer type 1, from LAC Three Letter Designator - "SAGE" (Incident Name) <u>Number</u> - 1 <u>Resource Designation Format</u> - SAGE TF 1 <u>Radio Call</u> - "Sage Task Force one" <u>Number Assigned By</u> - Resources Unit at the "Sage" incident

#### **RESOURCE DESIGNATION FORMAT - STRIKE TEAM OR TASK FORCE**

Designations for Strike Team components include name of strike team leader, agency designator, resource kind and agency number for individual units.

EXAMPLE: Operational area mixed agency Strike Team

<u>XBO ST 6201-A</u>	<u>XAL 2004-A</u>
STL Jones RIA	STL Smith OKL
BDO Engine 6	ALA Engine 2341
BDO Engine 3	BER Engine 2453
RIA Engine 2	OKL Engine 2554
RED Engine 5	OKL Engine 2563
COL Engine 1	PIE Engine 2843

## **REASSIGNING RESOURCES**

Reassignment of resources from one incident to another can be done with the consent of the agency's owning the resources.

OES resources may be reassigned by consent of Operational Area, Region or State Fire and Rescue Coordinator, respectively.

## USE OF SEQUENTIAL NUMBERS

Initial numbering of grouped resources will be assigned sequentially from the mutual aid area or individual agency block of numbers. It is recommended that numbers not be re-used on any single incident or during a period of multi-incident activity. <u>Example</u>: A Strike Team may be formed and numbered for a specific incident then demobilized and released. Re-use of that numbr during the same period of activity might cause confusion. During a period of high activity, it is recommended that <u>all</u> numbers in any block be used before recycling sequential numbers.

AGENCY DESIGNATOR	AGENCY	ASSIGNED S/T NOS.
OES	HEADQUARTERS OFFICE OF EMERGENCY SERVICES (STATEWIDE)	0800 - 0899

AGENCY DESIGNATOR	MUTUAL AID REGION I	ASSIGNED S/T NOS.
LFD	LOS ANGELES CITY FIRE DEPT.	1000 – 1074
XLA	LOS ANGELES, AREA "A"	1075 – 1099
LAC	LOS ANGELES CO. FIRE DEPT.	1100 – 1199
XLC	LOS ANGELES, AREA "C"	1200 – 1239
XLB	LOS ANGELES, AREA "B"	1240 – 1279
XLE	LOS ANGELES, AREA "E"	1280 – 1319
XLF	LOS ANGELES, AREA "F"	1320 – 1359
XLG	LOS ANGELES, AREA "G"	1360 – 1399
XOR	ORANGE	1400 – 1449
XSL	SAN LUIS OBISPO	1450 – 1499
XSB	SANTA BARBARA	1500 - 1529
SBC	SANTA BARBARA CO. FIRE DEPT.	1530 – 1549
XVE	VENTURA	1550 - 1565
VNC	VENTURA CO. FIRE DEPT.	1566 – 1599
USF	U.S. FOREST SERVICE	1600 – 1699
DOI	DEPARTMENT OF INTERIOR	1700 – 1799
OES	OFFICE OF EMERGENCY SERVICES	1800 – 1899
	NOT ALLOCATED	1900 – 1999

AGENCY DESIGNATOR	MUTUAL AID REGION II	ASSIGNED S/T NOS.
XAL	ALAMEDA	2000 - 2024
XCC	CONTRA COSTA	2025 – 2049
XDN	DEL NORTE	2050 - 2074
XHU	HUMBOLDT	2075 - 2099
XLK	LAKE	2100 – 2124
XMR	MARIN	2125 - 2149
XME	MENDOCINO	2150 - 2174
XMY	MONTEREY	2175 – 2199
XNA	NAPA	2200 - 2224
XBE	SAN BENITO	2225 - 2249
XSF	SAN FRANCISCO	2250 – 2274
XSM	SAN MATEO	2275 - 2299
XSC	SANTA CLARA	2300 - 2324
XCZ	SANTA CRUZ	2325 – 2349
XSO	SOLANO	2350 - 2374
XSN	SONOMA	2375 - 2399
	NOT ALLOCATED	2400 – 2599
USF	U.S. FOREST SERVICE	2600 – 2699
DOI	DEPARTMENT OF INTERIOR	2700 – 2799
OES	OFFICE OF EMERGENCY SERVICES	2800 – 2899
	NOT ALLOCATED	2900 – 2999
CDF	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	See Appendix B

AGENCY DESIGNATOR	MUTUAL AID REGION III	ASSIGNED S/T NOS.
XBU	BUTTE	3000 – 3024
XCO	COLUSA	3025 – 3049
XGL	GLENN	3050 – 3074
XLS	LASSEN	3075 – 3099
XMO	MODOC	3100 – 3124
XPU	PLUMAS	3125 - 3149
XSH	SHASTA	3150 – 3174
XSI	SIERRA	3175 – 3199
XSK	SISKIYOU	3200 – 3224
XSU	SUTTER	3225 – 3249
XTE	ТЕНАМА	3250 - 3274
XTR	TRINITY	3275 - 3299
XYU	YUBA	3300 - 3324
	NOT ALLOCATED	3325 - 3599
USF	U.S. FOREST SERVICE	3600 - 3699
BLM	BUREAU OF LAND MANAGEMENT	3700 - 3719
FWS	FISH AND WILDLIFE SERVICE	3720 - 3739
BIA	BUREAU OF INDIAN AFFAIRS	3740 - 3759
NPS	NATIONAL PARK SERVICE	3760 - 3779
DOI	DEPARTMENT OF INTERIOR, RESERVED FOR FUTURE EXPANSION	3780 - 3799
OES	OFFICE OF EMERGENCY SERVICES	3800 - 3899
	NOT ALLOCATED	3900 - 3999
CDF	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	See Appendix B

	MUTUAL AID REGION IV	
XAP	ALPINE	4000 – 4024
ХАМ	AMADOR	4025 – 4049
XCA	CALAVERAS	4050 – 4074
XED	EL DORADO	4075 – 4099
XNE	NEVADA	4100 – 4124
XPL	PLACER	4125 - 4149
XSA	SACRAMENTO	4150 - 4174
XSJ	SAN JOAQUIN	4175 – 4199
XST	STANISLAUS	4200 - 4224
ХТВ	TAHOE BASIN	4225 - 4249
ХТО	TUOLUMNE	4250 - 4274
XYO	YOLO	4275 - 4299
	NOT ALLOCATED	4300 - 4599
USF	U.S. FOREST SERVICE	4600 - 4699
DOI	DEPARTMENT OF INTERIOR	4700 - 4799
OES	OFFICE OF EMERGENCY SERVICES	4800 - 4899
	NOT ALLOCATED	4900 - 4999
CDF	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	See Appendix B

AGENCY DESIGNATOR	MUTUAL AID REGION V	ASSIGNED S/T NOS.
XFR	FRESNO	5000 – 5024
XKE	KERN	5025 - 5049
ХКІ	KINGS	5050 - 5074
XMA	MADERA	5075 - 5099
XMP	MARIPOSA	5100 – 5124
XMD	MERCED	5125 - 5149
XTU	TULARE	5150 - 5174
	NOT ALLOCATED	5175 – 5199
		5300 - 5599
KRN	KERN COUNTY FIRE DEPARTMENT	5200 - 5299
USF	U.S. FOREST SERVICE	5600 - 5699
BLM	BUREAU OF LAND MANAGEMENT	5700 - 5719
FWS	FISH AND WILDLIFE SERVICE	5720 - 5739
BIA	BUREAU OF INDIAN AFFAIRS	5740 - 5759
NPS	NATIONAL PARK SERVICE	5760 - 5779
DOI	DEPARTMENT OF INTERIOR, RESERVED FOR FUTURE EXPANSION	5780 - 5799
OES	OFFICE OF EMERGENCY SERVICES	5800 - 5899
	NOT ALLOCATED	5900 - 5999
CDF	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	See Appendix B

## MUTUAL AID REGION DESIGNATORS AND NUMBER LISTING (STRIKE TEAMS / TASK FORCES)

AGENCY		ASSIGNED
DESIGNATOR	MOTOAL AID REGION VI	S/T NOS.
XIM	IMPERIAL	6100 – 6149
XIN	INYO	6150 - 6174
XMN	MONO	6175 - 6199
XRI	RIVERSIDE	6000 - 6099
XBO	SAN BERNARDINO	6200 - 6299
XSD	SAN DIEGO	6400 - 6499
	NOT ALLOCATED	6300 - 6399
		6500 - 6599
USF	U.S. FOREST SERVICE	6600 - 6699
BLM	BUREAU OF LAND MANAGEMENT	6700 - 6719
FWS	FISH AND WILDLIFE SERVICE	6720 - 6739
BIA	BUREAU OF INDIAN AFFAIRS	6740 - 6759
NPS	NATIONAL PARK SERVICE	6760 - 6779
DOI	DEPARTMENT OF INTERIOR,	6780 - 6799
	RESERVED FOR FUTURE EXPANSION	
	OTHER	6715 - 6799
OES	OFFICE OF EMERGENCY SERVICES	6800 - 6899
	NOT ALLOCATED	6900 - 6999
CDF	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	See Appendix B

## MUTUAL AID REGION VI NUMBER LISTING FOR OES STRIKE TEAMS

AGENCY DESIGNATOR	OPERATIONAL AREA	ASSIGNED S/T NOS.
OES	IMPERIAL COUNTY	6810 - 6814
OES	INYO COUNTY	6815 - 6816
OES	MONO COUNTY	6817 - 6819
OES	RIVERSIDE COUNTY	6800 - 6809
OES	SAN BERNARDINO COUNTY	6820 - 6829
OES	SAN DIEGO COUNTY	6840 - 6849
OES	REGION VI	6860 - 6899

## **APPENDIX B**

## CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION STATEWIDE NUMBER LISTING (STRIKE TEAMS/ TASK FORCES)

AGENCY DESIGNATOR	CDF SACRAMENTO		ASSIGNED S/T NOS.
CDF			9000 - 9099
		UNALLOCATED	9500 – 9599
			9600 - 9699
			9700 - 9799
			9800 – 9899
			9900 - 9999

### **CDF NORTHERN REGION**

AGENCY DESIGNATOR		ASSIGNED S/T NOS.
RCC	CREWS	9196 - 9199
		9272 - 9273
		9294 - 9297
	DOZERS (RENTAL)	9100 - 9109
		9200 - 9209
	UNALLOCATED	9150 - 9159

## CDF NORTHERN REGION (9100-9299)

AGENCY DESIGNATOR	UNIT		ASSIGNED S/T NOS.
HUU	HUMBOLDT - DEL NORTE	ENGINES	9120 - 9127
		DOZERS	9128 - 9129
		CREWS	9184 - 9187
			9192 – 9193
LNU	SONOMA-LAKE-NAPA	ENGINES	9130 - 9137
			9140 - 9147
		DOZERS	9138 - 9139
			9148 - 9149
		CREWS	9180 – 9183
MEU	MENDOCINO	ENGINES	9110 - 9117
		DOZERS	9118 - 9119
		CREWS	9170 - 9171
			9194 - 9195
SCU	SANTA CLARA	ENGINES	9160 - 9167
		DOZERS	9168 - 9169
CZU	SAN MATEO-SANTA CRUZ	ENGINES	9170 - 9177
		DOZERS	9178 - 9179
		CREWS	9188 - 9199
BTU	BUTTE	ENGINES	9210 - 9217
		DOZERS	9218 - 9219
		CREWS	9270 - 9271
LMU	LASSEN - MODOC	ENGINES	9220 - 9227
		DOZERS	9228 - 9229
		CREWS	9276 – 9277
			9282 – 9283
			9292 - 9293
NEU	NEVADA - YUBA - PLACER	ENGINES	9230 - 9237
		DOZERS	9238 - 9239
		CREWS	9278 - 9279
SHU	SHASTA - TRINITY	ENGINES	9240 - 9247
		DOZERS	9248 - 9249
		CREWS	9286 - 9289
SKU	SISKIYOU	ENGINES	9260 - 9267
		DOZERS	9268 - 9269
		CREWS	9280 - 9281
TGU	TEHAMA - GLENN	ENGINES	9250 - 9257
		DOZERS	9258 - 9259
		CREWS	9274 – 9275
			9284 - 9285
			9290 - 9291

## **CDF SOUTHERN REGION**

AGENCY DESIGNATOR	CDF SOUTHERN REGION	ASSIGNED S/T NOS.
RSS	CREWS	9380 - 9381
		9478 - 9479
		9486 - 9487
	DOZERS (RENTAL)	9300 - 9309
		9400 - 9409
	UNALLOCATED	9320 - 9329
		9360 - 9369

## CDF SOUTHERN REGION (9300-9499)

AGENCY DESIGNATOR	UNIT		ASSIGNED S/T NOS.
RRU	RIVERSIDE	ENGINES	9310 - 9317
		DOZERS	9318 - 9319
		CREWS	9374 - 9375
			9382 - 9383
			9390 - 9391
BDU	SAN BERNARDINO	ENGINES	9350 - 9357
		DOZERS	9358 - 9359
		CREWS	9370 - 9373
			9384 - 9385
			9388 - 9389
SLU	SAN LUIS OBISPO	ENGINES	9340 - 9347
		DOZERS	9348 - 9349
		CREWS	9394 - 9399
MVU	SAN DIEGO	ENGINES	9330 - 9337
		DOZERS	9338 - 9339
		CREWS	9376 - 9379
			9386 - 9387
			9392 - 9393
AEU	AMADOR - EL DORADO	ENGINES	9450 - 9457
		DOZERS	9458 - 9459
		CREWS	9482 - 9485
FKU	FRESNO - KINGS	ENGINES	9430 - 9437
		DOZERS	9438 - 9439
		CREWS	9474 - 9475
MMU	MADERA-MARIPOSA-MERCED	ENGINES	9420 - 9427
		DOZERS	9428 - 9429
		CREWS	9470 - 9471
BEU	SAN BENITO - MONTEREY	ENGINES	9460 - 9467
		DOZERS	9468 - 9469
		CREWS	9488 - 9489
TUU	TULARE	ENGINES	9410 - 9447
		DOZERS	9418 - 9419
		CREWS	9472 - 9473
TCU	TUOLUMNE - CALAVERAS	ENGINES	9440 - 9447
		DOZERS	9448 - 9449
		CREWS	9476 - 9477
			9480 - 9481

## APPENDIX C

## UNITED STATES FOREST SERVICE STATEWIDE NUMBER LISTING (STRIKE TEAMS / TASK FORCES)

AGENCY DESIGNATOR	MUTUAL AID REGION I	ASSIGNED S/T NOS.
ANF	ANGELES	1600 - 1649
LPF	LOS PADRES	1650 - 1699

AGENCY DESIGNATOR	MUTUAL AID REGION II	ASSIGNED S/T NOS.
SRF	SIX RIVERS	2600 - 2649
LPF	NOT ALLOCATED	2650 - 2699

AGENCY DESIGNATOR	MUTUAL AID REGION III	ASSIGNED S/T NOS.
KNF	KLAMATH	3600 - 3614
LNF	LASSEN	3615 - 3629
MDF	MODOC	3630 - 3644
MNF	MENDOCINO	3645 - 3659
PNF	PLUMAS	3660 - 3674
SHF	SHASTA-TRINITY	3675 - 3689
	NOT ALLOCATED	3690 - 3699

AGENCY DESIGNATOR	MUTUAL AID REGION IV	ASSIGNED S/T NOS.
ENF	EL DORADO	4600 – 4629
STF	STANISLAUS	4630 – 4659
TNF	ТАНОЕ	4660 – 4689
TMU	LAKE TAHOE BASIN MANAGEMENT UNIT	4690 - 4695
	NOT ALLOCATED	4696 - 4699

AGENCY DESIGNATOR	MUTUAL AID REGION V	ASSIGNED S/T NOS.
SNF	SIERRA	5600 - 5649
SQF	SEQUOIA	5650 - 5699

AGENCY DESIGNATOR	MUTUAL AID REGION VI	ASSIGNED S/T NOS.
BDF	SAN BERNARDINO	6600 - 6630
CNF	CLEVELAND	6631 - 6659
INF	INYO	6660 - 6689
	NOT ALLOCATED	6690 - 6699

## APPENDIX D

## UNITED STATES DEPARTMENT OF INTERIOR STATEWIDE NUMBER LISTING (STRIKE TEAMS / TASK FORCES)

## <u>BLM</u>

AGENCY DESIGNATOR	MUTUAL AID REGION III	ASSIGNED S/T NOS.
NOD	NORTHERN CALIFORNIA REGION	3700 - 3719

AGENCY DESIGNATOR	MUTUAL AID REGION V	ASSIGNED S/T NOS.
BBD	CENTRAL CALIFORNIA REGION	5700 - 5719

AGENCY DESIGNATOR	MUTUAL AID REGION VI	ASSIGNED S/T NOS.
CDD	CALIFORNIA DESERT DISTRICT	6700 - 6719

## SAO SACRAMENTO AREA OFFICE BIA

AGENCY DESIGNATOR	MUTUAL AID REGION III	ASSIGNED S/T NOS.
NCA	NORTHERN CALIFORNIA AGENCY	3740 – 3759

AGENCY DESIGNATOR	MUTUAL AID REGION V	ASSIGNED S/T NOS.
CCA	CENTRAL CALIFORNIA AGENCY	5740 - 5759

AGENCY DESIGNATOR	MUTUAL AID REGION VI	ASSIGNED S/T NOS.
SCA	SOUTHERN CALIFORNIA AGENCY	6740 - 6759

## **APPENDIX E** California Agency Designators Alphabetical by Agency

ID	AGENCY	CITY
FFT	233 <sup>rd</sup> FIRE FIGHTING TEAM	ROSEVILLLE
ADI	ADIN FPD	ADIN
AGC	AEROJET ORDINANCE COMPANY FD	CHINO HILLS
PLN	AIR FORCE PLANT 42/PYRAMID SVCS INC.	PALMDALE
ANG	AIR NATIONAL GUARD FD	FRESNO
ACF	ALAMEDA CFD	SAN LEANDRO
ALA	ALAMEDA FD	ALAMEDA
ALB	ALBANY FD	ALBANY
ALR	ALBION/LITTLE RIVER VFD	LITTLE RIVER
ALH	ALHAMBRA FD	ALHAMBRA
ALG	ALLEGHANY VFD	ALLEGHANY
ALP	ALPINE CFD	CAMINO
ACP	ALPINE FPD	ALPINE
ASC	ALPINE MEADOWS FPD	TAHOE CITY
AFP	ALTA FPD	ALTA
ALT	ALTAVILLE/MELONES FPD	ALTAVILLE
ALV	ALTURAS CITY FD	ALTURAS
ALF	ALTURAS RURAL FPD	ALTURAS
AMC	AMADOR FPD	JACKSON
ACY	AMERICAN CANYON FPD	AMERICAN CANYON
KMC	AMERICAN CHEMICAL	TRONA
ANA	ANAHEIM FD	ANAHEIM
AFD	ANDERSON FPD	ANDERSON
AVY	ANDERSON VALLEY CSD FD	BOONVILLE
AGL	ANGELS CAMP FD	ANGELS CAMP
ANN	ANNAPOLIS VFD	ANNAPOLIS
ANT	ANTELOPE VALLEY FD	COLEVILLE
APP	APPLE VALLEY FPD	APPLE VALLEY
APT	APTOS LA SELVA (BEACH) FPD	APTOS
ARB	ARBUCKLE/COLLEGE CITY FPD (C.N.G.)	ARBUCKLE
ARC	ARCADIA FD	ARCADIA
ARF	ARCATA FPD	ARCATA
ATC	AROMAS TRI-COUNTY FPD	AROMAS
ABL	ARROWBEAR LAKE FD	ARROWBEAR LAKE
AYG	ARROYO GRANDE FD	ARROYO GRANDE
ART	ARTOIS FPD	ARTOIS
ASP	ASPENDELL FC	BISHOP
Alpha by Ar		Alnha hy Age

Alpha by Agency

Alpha by Agency

ID	AGENCY	CITY
ATA	ATASCADERO CITY FD	ATASCADERO
ATS	ATASCADERO STATE HOSPITAL FD	ATASCADERO
ATW	ATWATER FD	ATWATER
AUB	AUBERRY VFD	AUBERRY
ABR	AUBURN VFD	AUBURN
AVA	AVALON FD	AVALON
CPA	AVENAL STATE PRISON	AVENAL
ACR	AVIATION CFR FD	STOCKTON
AVI	AVILA BEACH FPD	AVILA BEACH
BAK	BAKER FD	BAKER
BKF	BAKERSFIELD FD	BAKERSFIELD
BLD	BALD MOUNTAIN VFD	AUBERRY
BBB	BARONA FPD	LAKESIDE
BAR	BARSTOW FPD	BARSTOW
BAY	BAYLISS FPD	GLENN
BEA	BEALE AFB FD	BEALE AFB
BRV	BEAR VALLEY FD	BEAR VALLEY
BIV	BEAR VALLEY/INDIAN VALLEY FD	STONYFORD
BEC	BECKWOURTH FD	BECKWOURTH
BGF	BEGINNINGS VFD	REDWAY
BVV	BELLA VISTA VFC	BELLA VISTA
BEN	BEN LOMOND FPD	BEN LOMOND
BNC	BENICIA FD	BENICIA
BVF	BENNETT VALLEY FPD	SANTA ROSA
BER	BERKELEY FD	BERKELEY
BTH	BETHEL ISLAND FPD	BETHEL ISLAND
BHL	BEVERLY HILLS FD	BEVERLY HILLS
CCA	BIA, CENTRAL CALIF AGENCY	SACRAMENTO
NCA	BIA, NORTHERN CALIF AGENCY	REDDING
SAO	BIA, SACRAMENTO AREA OFFICE	SACRAMENTO
SCA	BIA, SOUTHERN CALIF AGENCY	RIVERSIDE
BBC	BIG BEAR CITY CSD	BIG BEAR CITY
BBL	BIG BEAR LAKE FPD	BIG BEAR LAKE
BBV	BIG BEND VFC	BIG BEND
BCR	BIG CREEK VFD	BIG CREEK
BGP	BIG PINE FPD	BIG PINE
BSB	BIG SUR VFB	BIG SUR
BGV	BIG VALLEY FPD	BIEBER
BIG	BIGGS FD	BIGGS
BSH	BISHOP VFD	BISHOP
BBD	BLM, BAKERSFIELD DISTRICT	BAKERSFIELD
		Alpha by

ID	AGENCY	CITY
BLM	BLM, CALIFORNIA	(see CSO)
CSO	BLM, CALIFORNIA STATE OFFICE FAM	SACRAMENTO
CDD	BLM, DESERT DISTRICT	RIVERSIDE
NOD	BLM, NORTHERN CALIFORNIA DISTRICT	SUSANVILLE
OVD	BLM, OWENS VALLEY DISTRICT	BISHOP
BFC	BLOOMFIELD VFD	VALLEY FORD
BLU	BLUE LAKE VFD	BLUE LAKE
BLY	BLYTHE FD	BLYTHE
BDB	BODEGA BAY FPD	BODEGA BAY
BOD	BODEGA VFD	BODEGA
BOH	BOHEMIAN GROVE FD	MONTE RIO
BOL	BOLINAS FPD	BOLINAS
BON	BONITA SUNNYSIDE FPD	BONITA
BGO	BORREGO SPRINGS FD	BORREGO SPRINGS
BOU	BOULDER CREEK FPD	BOULDER CREEK
BLV	BOULEVARD F&RD	BOULEVARD
BRN	BRANCIFORTE FPD	SANTA CRUZ
BRW	BRAWLEY FD	BRAWLEY
BRE	BREA FD	BREA
BRI	BRIDGEPORT FPD	BRIDGEPORT
BRS	BRISBANE FD	BRISBANE
BPC	BRITISH PETROLEUM CARSON FD	CARSON
BCS	BROOKTRAILS CSD FD	WILLITS
BRK	BURBANK FD	BURBANK
BRB	BURBANK PARADISE FPD	MODESTO
BIA	BUREAU OF INDIAN AFFAIRS	(see CCA/NCA/SAO/SCA)
BUR	BURLINGAME FD	BURLINGAME
BUF	BURNEY FPD	BURNEY
BUT	BUTTE CFD	OROVILLE
GLC	BUTTE CITY FD	BUTTE CITY
BTE	BUTTE VALLEY FPD	MAC DOEL
CNH	C AND H SUGAR COMPANY FD	CROCKETT
CSD	C-ROAD CSD	BLAIRSDEN
CBT	CABAZON TRIBAL FD, STN 276	INDIO
CFC	CACHAGUA FPD	CARMEL VALLEY
FRG	CALAVERAS CFD	SAN ANDREAS
CLX	CALEXICO FD	CALEXICO
CAC	CALIFORNIA CITY FD	CALIFORNIA CITY
CCC	CALIFORNIA CONSERVATION CORP.	SACRAMENTO
CCO	CALIFORNIA CORRECTIONAL CENTER	LITCHFIELD
DOT	CALIF. DEPT. OF TRANSPORTATION	SACRAMENTO

Alpha by Agency

Alpha by Agency

ID	AGENCY	CITY
CIM	CALIF. INSTITUTE FOR MEN – CHINO FD	CHINO
CIW	CALIF. INSTITUTE FOR WOMEN-CORONA	CORONA
MFC	CALIFORNIA MEDICAL FACILITY FD	VACAVILLE
CMC	CALIF. MEN'S COLONY FD	SAN LUIS OBISPO
CNA	CALIFORNIA NATIONAL GUARD	RANCHO CORDOVA
CPV	CALIFORNIA PINES VFD	ALTURAS
CRC	CALIFORNIA REHABILITATION CENTER	NORCO
CSP	CALIFORNIA STATE PARKS	SACRAMENTO
CPT	CALIPATRIA FD	CALIPATRIA
CPP	CALIPATRIA STATE PRISON FD	CALIPATRIA
CAL	CALISTOGA FD	CALISTOGA
CMB	CAMBRIA FD	CAMBRIA
CAM	CAMERON PARK FD	CAMERON PARK
CMK	CAMP MEEKER VFD	CAMP MEEKER
MCP	CAMP PENDLETON FD	CAMP PENDLETON
BOB	CAMP ROBERTS FD	CAMP ROBERTS
CPO	CAMPO FR (CSA-112)	CAMPO
CBK	CAMPO RESERVATION FD	CAMPO
CAN	CANBY FPD	CANBY
CPY	CAPAY FPD	ORLAND
PAY	CAPAY VALLEY FPD	BROOKS
CAR	CARLOTTA CSD	CARLOTTA
CBD	CARLSBAD FD	CARLSBAD
CBS	CARMEL BY THE SEA FD	CARMEL BY THE SEA
CHF	CARMEL HIGHLANDS FPD	MONTEREY
CVF	CARMEL VALLEY FPD	CARMEL VALLEY
CRP	CARPINTERIA/SUMMERLAND FPD	CARPINTERIA
CSL	CASSEL VFC	CASSEL
CPD	CASTELLA FPD	CASTELLA
CDR	CATHEDRAL CITY FD	CATHEDRAL CITY
CAY	CAYUCOS FPD	CAYUCOS
CAZ	CAZADERO FD	CAZADERO
AEU	CDF, AMADOR/EL DORADO	CAMINO
BTU	CDF, BUTTE	OROVILLE
CNR1	CDF, CALIF. NORTHERN REGION ADMIN	SANTA ROSA
CNR	CDF, CALIF. NORTHERN REGION OP's	REDDING
CSR1	CDF, CALIF. SOUTHERN REGION ADMIN	FRESNO
CSR	CDF, CALIF. SOUTHERN REGION OP's	RIVERSIDE
CFA	CDF FIRE ACADEMY	IONE
FKU	CDF, FRESNO/KINGS	SANGER
CDF	CDF HEADQUARTERS	SACRAMENTO

ID	AGENCY	CITY
HUU	CDF, HUMBOLDT/DEL NORTE	FORTUNA
LNU	CDF, LAKE/NAPA/SONOMA	SAINT HELENA
LMU	CDF, LASSEN/MODOC	SUSANVILLE
MMU	CDF, MADERA/MARIPOSA/MERCED	MARIPOSA
MEU	CDF, MENDOCINO	WILLITS
NEU	CDF, NEVADA/YUBA/PLACER	AUBURN
RRU	CDF, RIVERSIDE	PERRIS
BEU	CDF, SAN BENITO/MONTEREY	MONTEREY
BDU	CDF, SAN BERNARDINO	SAN BERNARDINO
MVU	CDF, SAN DIEGO/IMPERIAL	EL CAJON
SLU	CDF, SAN LUIS OBISPO	SAN LUIS OBISPO
CZU	CDF, SAN MATEO/SANTA CRUZ	FELTON
SCU	CDF, SANTA CLARA	MORGAN HILL
SHU	CDF, SHASTA/TRINITY	REDDING
SKU	CDF, SISKIYOU	YREKA
TGU	CDF, TEHAMA/GLENN	RED BLUFF
TCU	CDF, TOULUMNE/CALAVERAS	SAN ANDREAS
TUU	CDF, TULARE	VISALIA
CDV	CEDARVILLE FPD	CEDARVILLE
CNV	CENTERVILLE VFC	REDDING
CEP	CENTINELA STATE PRISON FD	IMPERIAL
CCF	CENTRAL CALAVERAS FPD	MOUNTAIN RANCH
CWF	CENTRAL CALIF WOMEN'S FACILITY FD	CHOWCHILLA
CEN	CENTRAL COUNTY FD	BURLINGAME
CTL	CENTRAL FPD of SANTA CRUZ COUNTY	SANTA CRUZ
CES	CERES DPS FD	CERES
CVV	CHALFANT VALLEY FD	CHALFANT VALLEY
CHE	CHESTER FPD	CHESTER
OIL	CHEVRON FD (XCC)	RICHMOND
CVN	CHEVRON REFINERY FD	EL SEGUNDO
CHI	CHICO FD	CHICO
CHO	CHINO VALLEY FPD	CHINO HILLS
CHW	CHOWCHILLA VFD	CHOWCHILLA
CHA	CHUCKAWALLA VALLEY STATE PRISON FD	BLYTHE
CHV	CHULA VISTA FD	CHULA VISTA
CBF	CLARKSBURG FPD	CLARKSBURG
CLC	CLEAR CREEK CSD FD	CLEAR CREEK
CLO	CLEARLAKE OAKS FD	CLEARLAKE OAKS
CLE	CLEMENTS RURAL FPD	CLEMENTS
CLD	CLOVERDALE FPD	CLOVERDALE

ID	AGENCY	CITY
CLV	CLOVIS FD	CLOVIS
CLG	COALINGA FD	COALINGA
CCV	COFFEE CREEK VFC	TRINITY CENTER
CFX	COLFAX VFD	COLFAX
CGV	COLLEGEVILLE FPD	STOCKTON
CLM	COLMA FPD	COLMA
COL	COLTON FD	COLTON
CCD	COLUMBIA COLLEGE FD	SONORA
CLB	COLUMBIA FPD	COLUMBIA
CLS	COLUSA FD	COLUSA
MCT	COMBAT CENTER FD (USMC)	TWENTY-NINE PALMS
CMT	COMPTCHE CSD VFD	COMPTCHE
CMP	COMPTON FD	COMPTON
CTN	COMPTONVILLE VFD	COMPTONVILLE
CCH	CONTRA COSTA CO. ENVIR. HLTH SVCS	MARTINEZ
CON	CONTRA COSTA CFPD	PLEASANT HILL
CCW	CONTRA COSTA WATER DISTRICT	BRENTWOOD
COC	COPCO LAKE FPD	MONTAGUE
COP	COPPEROPOLIS FPD	COPPEROPOLIS
CPK	CORCORAN STATE PRISON FD	CORCORAN
CNG	CORNING VFD	CORNING
COR	CORONA FD	CORONA
CRD	CORONADO FD	CORONADO
CTF	CORRECTIONAL TRAINING FACILITY-CDC	SOLEDAD
CMD	CORTE MADERA FD	CORTE MADERA
COS	COSTA MESA FD	COSTA MESA
COT	COTTONWOOD FPD	COTTONWOOD
CLF	COURTLAND FPD	COURTLAND
CVL	COVELO FPD	COVELO
CRS	CRESCENT CITY VFP	CRESCENT CITY
CRT	CRESCENT FPD	CRESCENT CITY
CRF	CREST FOREST FPD	CRESTLINE
CRK	CROCKETT-CARQUINEZ FPD	CROCKETT
CUL	CULVER CITY FD	CULVER CITY
CYP	CYPRESS FPD	MONTEREY
DAG	DAGGETT CSD	DAGGETT
DAL	DALY CITY FD	DALY CITY
DAV	DAVIS CREEK FPD	DAVIS CREEK
DVS	DAVIS FD	DAVIS
DLV	DE LUZ VFD	FALLBROOK
DSF	DEER SPRINGS FD	ESCONDIDO
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ID	AGENCY	CITY
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DLA	DEF. DIST. DEPOT SAN JOAQUIN FPP	STOCKTON
DMR	DEL MAR FD	DEL MAR
DLT	DELTA FPD (XSJ)	RIO VISTA
DEN	DENAIR FPD	DENAIR
TDV	DEUEL VOCATIONAL INSTITUTION	TRACY
DSP	DIAMOND SPRINGS/EL DORADO FPD	DIAMOND SPRINGS
DIN	DINUBA FD	DINUBA
DIX	DIXON FD	DIXON
DOF	DOBBINS/OREGON HOUSE FPD	OREGON HOUSE
DON	DONNER SUMMIT FD	SODA SPRINGS
DCF	DONOVAN CORRECTIONAL FACILITY	SAN DIEGO
DOR	DORRIS FD	DORRIS
DOS	DOS PALOS VFD	DOS PALOS
DOU	DOUGLAS CITY FD	DOUGLAS CITY
DOW	DOW CHEMICAL COMPANY FD	PITTSBURG
DNY	DOWNEY FD	DOWNEY
DWN	DOWNIEVILLE FPD	DOWNIEVILLE
DOY	DOYLE FPD	DOYLE
DCR	DRY CREEK VFPD	ROSEVILLE
DNN	DUNNIGAN FPD	DUNNIGAN
DUN	DUNSMUIR FD	DUNSMUIR
DUT	DUTCH FLAT VFD	DUTCH FLAT
EAG	EAGLEVILLE FPD	EAGLEVILLE
EBY	EAST BAY REGIONAL PARKS FD	OAKLAND
ECO	EAST CFD (XSD)	EL CAJON
CCE	EAST CONTRA COSTA FPD	BRENTWOOD
EDF	EAST DAVIS FPD	DAVIS
EDI	EAST DIABLO FPD	BRENTWOOD
NCL	EAST NICOLAUS FD	EAST NICOLAUS
EBB	EBBETTS PASS FPD	ARNOLD
FPB	EDWARDS AFB FPD	EDWARDS AFB
ELC	EL CAJON FD	EL CAJON
ECN	EL CENTRO FD	EL CENTRO
ECR	EL CERRITO FD	EL CERRITO
ECF	EL DORADO CFPD	CAMINO
EDH	EL DORADO HILLS FD	EL DORADO HILLS
EMD	EL MEDIO FPD	OROVILLE
ELS	EL SEGUNDO FD	EL SEGUNDO
SDC	ELDRIDGE FD	ELDRIDGE
EFF	ELFIN FOREST/HARMONY GROVE FD	ELFIN FOREST
ELK	ELK CREEK FPD	ELK CREEK

ID	AGENCY	CITY
EGR	ELK GROVE CSD FD	ELK GROVE
EKV	ELK VFD	ELK
EHF	ELKHORN VFD	WEST SACRAMENTO
EME	EMERYVILLE F&ES	EMERYVILLE
ENC	ENCINITAS FD	ENCINITAS
ESL	ESCALON CONSOLIDATED FPD	ESCALON
ESC	ESCONDIDO FD	ESCONDIDO
ESP	ESPARTO FPD	ESPARTO
ETN	ETNA FD	ETNA
EUR	EUREKA FD	EUREKA
EXE	EXETER FD	VISALIA
EXX	EXXON BENECIA REFINERY CO. FD	BENICIA
FRF	FAIRFIELD FD	FAIRFIELD
FAL	FALL RIVER MILLS FPD	FALL RIVER MILLS
FLL	FALLEN LEAF CSD VFD	SOUTH LAKE TAHOE
FMV	FARMERSVILLE FD	FARMERSVILLE
FAR	FARMINGTON RURAL FPD	FARMINGTON
FFD	FEDERAL FD (XSD)	SAN DIEGO
FFV	FEDERAL FD (XVE)	PORT MUGU
LCI	FEDERAL CORRECT'L/COMPLEX FD	LOMPOC
FEL	FELTON FPD	FELTON
FEN	FERNDALE FPD	FERNDALE
FBR	FIELDBROOK FD	FIELDBROOK
FLM	FILLMORE VFD	FILLMORE
FRB	FIREBAUGH FD	FIREBAUGH
FOL	FOLSOM FD	FOLSOM
FPF	FOLSOM PRISON F&R	REPRESA
FHD	FOOTHILL FPD (XCA)	VALLEY SPRINGS
FTL	FOOTHILL FPD (XYU)	BROWNSVILLE
FHF	FORESTHILL FPD	FORESTHILL
FRV	FORESTVILLE FPD	FORESTVILLE
FTB	FORT BIDWELL FD	FORT BIDWELL
BRG	FORT BRAGG FP	FORT BRAGG
FDK	FORT DICK FPD	FORT DICK
FHL	FORT HUNTER LIGGETT FD	FORT HUNTER LIGGETT
SFD	FORT IRWIN FD	FORT IRWIN
FTJ	FORT JONES FD	FORT JONES
FTR	FORT ROSS VFC	CAZADERO
FRT	FORTUNA FPD	FORTUNA
FOS	FOSTER CITY FD	FOSTER CITY
FVY	FOUNTAIN VALLEY FD	FOUNTAIN VALLEY
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ID	AGENCY	CITY
FOW	FOWLER FD	FOWLER
FRE	FREMONT FD	FREMONT
FRC	FRENCH CAMP/MCKINLEY FPD	FRENCH CAMP
FGF	FRENCH GULCH FPD	FRENCH GULCH
FDA	FRESNO AIRPORT FD	FRESNO
FCO	FRESNO CFPD	SANGER
FRN	FRESNO FD	FRESNO
FLV	FRUITLAND VFC	MYERS FLAT
FUL	FULLERTON FD	FULLERTON
DVF	FURNACE CREEK VFD	DEATH VALLEY
TNR	FWS-SAN DIEGO COMPLEX OF REFUGES	JAMUL
GAL	GALT FPD	GALT
GAR	GARBERVILLE FPD	GARBERVILLE
GGV	GARDEN GROVE FD	GARDEN GROVE
GRV	GARDEN VALLEY FPD	GARDEN VALLEY
GAS	GASQUET FPD	GASQUET
GAZ	GAZELLE FPD	GAZELLE
GEO	GEORGETOWN FPD	GEORGETOWN
GER	GERBER FD	GERBER
GEY	GEYSERVILLE FPD	GEYSERVILLE
GIL	GILROY FD	GILROY
GLE	GLEN ELLEN FPD	GLEN ELLEN
GLN	GLENDALE FD	GLENDALE
GCF	GLENN/CODORA FPD	GLENN
GFD	GOLD RIDGE FPD	SEBASTOPOL
GNZ	GONZALES VFD	GONZALES
GRA	GRAEAGLE FPD	GRAEAGLE
GRS	GRASS VALLEY FD	GRASS VALLEY
GTN	GRATON FPD	GRATON
GRN	GREENFIELD VFD	GREENFIELD
GHC	GREENHORN CREEK CSD VFD	QUINCY
GVF	GREENVILLE FPD	GREENVILLE
GWR	GREENWOOD RIDGE FD	ELK
GND	GRENADA FPD	GRENADA
GRD	GRIDLEY FD	OROVILLE
GCS	GROVELAND CSD FD	GROVELAND
GRO	GROVER BEACH FD	GROVER BEACH
GUA	GUADALUPE FD	GUADALUPE
GUS	GUSTINE VFD	GUSTINE
HCS	HALLWOOD CSD #10	MARYSVILLE
HBF	HAMILTON BRANCH FPD	LAKE ALMANOR

ID	AGENCY	CITY
HAM	HAMILTON CITY FD	HAMILTON CITY
HMM	HAMMOND RANCH FC	WEED
HAN	HANFORD FD	HANFORD
HAP	HAPPY CAMP FPD	HAPPY CAMP
HVF	HAPPY VALLEY FPD	ANDERSON
HAT	HAT CREEK VFC	HAT CREEK
HBV	HAWKINS BAR VFD	SALYER
HYF	HAYFORK FD	HAYFORK
HAY	HAYWARD FD	HAYWARD
HEA	HEALDSBURG FD	HEALDSBURG
HCF	HEARST CASTLE FD	SAN SIMEON
HTL	HEARTLAND COMM. FACILITY AUTHORITY	EL CAJON
HMT	HEMET FD	HEMET
HER	HERALD FPD	HERALD
HMB	HERMOSA BEACH FD	HERMOSA BEACH
HES	HESPERIA FPD	HESPERIA
HGF	HIGGINS AREA FPD	AUBURN
HBO	HILLSBOROUGH FD	HILLSBOROUGH
HOL	HOLLISTER FD	HOLLISTER
HTF	HOLT FD	HOLT
HLT	HOLTVILLE FD	HOLTVILLE
HIA	HOOPA WILDLAND FSC	HOOPA
HOO	HOOPA VFD	HOOPA
HOP	HOPLAND VFD	HOPLAND
HOR	HORNBROOK FPD	HORNBROOK
HAC	HUGHES AIRCRAFT COMPANY EDSG	EL SEGUNDO
HGS	HUGHSON FPD	HUGHSON
HUM	HUMBOLDT FPD #1	EUREKA
HTB	HUNTINGTON BEACH FD	HUNTINGTON BEACH
HLV	HUNTINGTON LAKE VFD	LAKESHORE
HYM	HYAMPOM FD	HYAMPOM
IDL	IDYLLWILD FPD	IDYLLWILD
IGO	IGO-ONO VFD	IGO
IMB	IMPERIAL BEACH FD	IMPERIAL BEACH
IMP	IMPERIAL CFD	IMPERIAL
IMR	IMPERIAL FD	IMPERIAL
IDP	INDEPENDENCE FPD	INDEPENDENCE
IMF		RAMONA
INV	INVERNESS PUD (IFD)	INVERNESS
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ID	AGENCY		CITY
IBV	IRISH BEACH VFD		MANCHESTER
ILE	ISLETON FD		ISLETON
ISL	ISLETON FPD		ISLETON
JCK	JACKSON VALLEY FPD		IONE
JKS	JACKSON VFD		JACKSON
JST	JAMESTOWN FPD		JAMESTOWN
JNV	JANESVILLE FPD		JANESVILLE
JNR	JENNER VFD		JENNER
JEN	JENNY LIND FPD		VALLEY SPRINGS
JPL	JET PROPULSION LABORAT	ORY FD	PASADENA
JVV	JONES VALLEY VFC		REDDING
JVF	JULIAN/CUYAMACA FPD		JULIAN
JCF	JUNCTION CITY FPD		JUNCTION CITY
JUN	JUNE LAKE FPD		JUNE LAKE
KAN	KANAWHA FPD		WILLOWS
KEE	KEELER FC		KEELER
KLS	KELSEYVILLE FPD		KELSEYVILLE
KEN	KENSINGTON FPD		EL CERRITO
KNT	KENTFIELD FPD		KENTFIELD
KWD	KENWOOD FPD		KENWOOD
KRN	KERN CFD		BAKERSFIELD
TPC	KERN TEHACHAPI CORRECTIONAL	L INSTITUTION	TEHACHAPI
KES	KESWICK VFC		SHASTA
KEY	KEYES FPD		KEYES
KIN	KING CITY FD		KING CITY
KCF	KINGS CFD		HANFORD
KNG	KINGSBURG FD		KINGSBURG
KRK	KIRKWOOD VFD		KIRKWOOD
KJC	KJC OPERATIONS COMPANY	′ ER	BORON
KLA	KLAMATH FPD		KLAMATH
KLR	KLAMATH RIVER FC		HORSECREEK
KFD	KNEELAND FPD		KNEELAND
KNI	KNIGHTS LANDING VFD		KNIGHTS LANDING
KNV	KNIGHTS VALLEY VFD		CALISTOGA
LHB	LA HABRA FD		LA HABRA
LHH	LA HABRA HEIGHTS FD		LA HABRA HEIGHTS
LMS	LA MESA FD		LA MESA
LPR	LA PORTE FPD		LA PORTE
LVN	LA VERNE FD		LA VERNE
LAB	LAGUNA BEACH FD		LAGUNA BEACH
LSH	LAKE CFPD		CLEARLAKE
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ID	AGENCY	CITY
LKC	LAKE CITY FPD	LAKE CITY
LSN	LAKE ELSINORE FD	PERRIS
LFV	LAKE FOREST VFD	SUSANVILLE
LST	LAKE SHASTINA CFD	WEED
LAV	LAKE VALLEY FPD	SOUTH LAKE TAHOE
LHD	LAKEHEAD VFC	LAKEHEAD
LKP	LAKEPORT CFPD	LAKEPORT
LKS	LAKESIDE FPD	LAKESIDE
LKV	LAKEVILLE VFD	PETALUMA
LRK	LARKSPUR FD	LARKSPUR
LMD	LATHROP/MANTECA FPD	LATHROP
LAT	LATON FPD	LATON
LTB	LATROBE FPD	SHINGLE SPRINGS
LLL	LAWRENCE/LIVERMORE NAT'L LAB FD	LIVERMORE
LEE	LEE VINING VFD	LEE VINING
LEG	LEGGETT VALLEY FPD	LEGGETT
LGV	LEMON GROVE FD	LEMON GROVE
LEM	LEMOORE VFD	LEMOORE
LEW	LEWISTON VFD	LEWISTON
LIB	LIBERTY RURAL FPD	ACAMPO
LIK	LIKELY FPD	LIKELY
LNC	LINCOLN FD	LINCOLN
LNA	LINDA FPD	MARYSVILLE
LPE	LINDEN-PETERS RURAL FPD	LINDEN
LNS	LINDSAY FD	LINDSAY
LTL	LITTLE LAKE FPD	WILLITS
LVV	LITTLE VALLEY CSD FD	LITTLE VALLEY
LAP	LIVERMORE-PLEASANTON FD	PLEASANTON
LVG	LIVINGSTON FD	MARIPOSA
LGR	LOCAL GOVERNMENT RESOURCES	
LHM	LOCKHEED MISSLE & SPACE FD	SANTA CRUZ
LFP	LOCKWOOD FPD	VOLCANO
LOD	LODI FD	LODI
LOL	LOLETA FPD	LOLETA
LOM	LOMA LINDA FD	LOMA LINDA
LRB	LOMA RICA/BROWNS VALLEY CSD	MARYSVILLE
LMP	LOMPOC FD	LOMPOC
LPN	LONE PINE VFD	LONE PINE
LOB	LONG BEACH FD	LONG BEACH
LVL	LONG VALLEY FD	CROMBERG
LVF	LONG VALLEY FPD	LAYTONVILLE

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MTNMAYTEN FDMONTAGUEMCAMC ARTHUR VFDMC ARTHURMCUMC CLOUD FDMCCLOUDMVFMEADOW VALLEY FPDMEADOW VALLEYMEKMEEKS BAY FPDTAHOMAMFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MYC	MAYACAMAS VFD	GLEN ELLEN
MCAMC ARTHUR VFDMC ARTHURMCUMC CLOUD FDMCCLOUDMVFMEADOW VALLEY FPDMEADOW VALLEYMEKMEEKS BAY FPDTAHOMAMFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MTN	MAYTEN FD	MONTAGUE
MCUMC CLOUD FDMCCLOUDMVFMEADOW VALLEY FPDMEADOW VALLEYMEKMEEKS BAY FPDTAHOMAMFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MCA	MC ARTHUR VFD	MC ARTHUR
MVFMEADOW VALLEY FPDMEADOW VALLEYMEKMEEKS BAY FPDTAHOMAMFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MCU	MC CLOUD FD	MCCLOUD
MEKMEEKS BAY FPDTAHOMAMFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MVF	MEADOW VALLEY FPD	MEADOW VALLEY
MFWMENDOCINO CFW/CO. OESWILLITSMNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MEK	MEEKS BAY FPD	TAHOMA
MNDMENDOCINO FPDMENDOCINOMENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MFW	MENDOCINO CFW/CO. OES	WILLITS
MENMENDOTA FDSANGERMNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MND	MENDOCINO FPD	MENDOCINO
MNLMENLO PARK FPDMENLO PARKMRDMERCED CFDMERCEDMERMERCED FDMERCED	MEN	MENDOTA FD	SANGER
MRDMERCED CFDMERCEDMERMERCED FDMERCED	MNL	MENLO PARK FPD	MENLO PARK
MER MERCED FD MERCED	MRD	MERCED CFD	MERCED
	MER	MERCED FD	MERCED

ID	AGENCY	CITY
MDN	MERIDIAN FD	MERIDIAN
MGR	MESA GRANDE FD	SANTA YSABEL
WUK	MI-WUK/SUGAR PINE FPD	MI-WUK
MCC	MID-COAST FIRE BRIGADE	CARMEL
MOS	MID-PENNISULA OPEN SPACE DISTRICT	LOS ALTOS
MLF	MILFORD FPD	MILFORD
LOS	MILITARY DEPT. – STATE OF CALIFORNIA	LOS ALAMITOS
MLV	MILL VALLEY FD	MILL VALLEY
MIL	MILLBRAE FD	MILLBRAE
MVL	MILLVILLE FPD	MILLVILLE
MLP	MILPITAS FD	MILPITAS
MIR	MIRANDA CSD	MIRANDA
MST	MODESTO FD	MODESTO
MOF	MOFFETT FIELD FD	MOFFETT FIELD
MOK	MOKELUMNE HILL FPD	MOKELUMNE HILL
MKE	MOKELUMNE RURAL FD	LOCKEFORD
MON	MONO CITY FPD	LEE VINING
MRV	MONROVIA FD	MONROVIA
MTF	MONTAGUE FPD	MONTAGUE
MTC	MONTCLAIR FD	MONTCLAIR
MRO	MONTE RIO FPD	MONTE RIO
MTB	MONTEBELLO FD	MONTEBELLO
MTO	MONTECITO FPD	SANTA BARBARA
MNT	MONTEREY FD	MONTEREY
MPK	MONTEREY PARK FD	MONTEREY PARK
PMA	MONTEREY PENINSULA AIRPORT FD	MONTEREY
ZUM	MONTEZUMA FPD (XSJ)	STOCKTON
MTZ	MONTEZUMA FPD (XSO)	RIO VISTA
RAN	MONTEZUMA VALLEY VFD	RANCHITA
MTG	MONTGOMERY CREEK VFC	MONTGOMERY CREEK
MOR	MORAGA/ORINDA FPD	ORINDA
MRF	MORONGO INDIAN RESERVATION FD	BANNING
MGO	MORONGO VALLEY CSD	MORONGO VALLEY
MQT	MOSQUITO FPD	PLACERVILLE
BDY	MOUNT BALDY FD	MT. BALDY
MLG	MOUNT LAGUNA VFD	MT LAGUNA
MTS	MOUNT SHASTA FD	MT SHASTA
MSH	MOUNT SHASTA FPD	MT SHASTA
MSV	MOUNT SHASTA VISTA VFC	MONTAGUE
MFR	MOUNTAIN FR	MOUNTAIN RANCH
WMG	MOUNTAIN GATE FD	REDDING

ID	AGENCY	CITY
MCM	MTN TRAINING WARFARE CNTR USMC	BRIDGEPORT
MVY	MOUNTAIN VALLEY VFD	DUNLAP
MOU	MOUNTAIN VFD	CALISTOGA
MTV	MOUNTAIN VIEW FD	MOUNTAIN VIEW
MVW	MOUNTAIN VIEW FPD	CROWS LANDING
MUI	MUIR BEACH VFD	MUIR BEACH
MUP	MULE CREEK STATE PRISON	IONE
MRP	MURPHYS FPD	MURPHYS
MUR	MURRIETA FPD	MURRIETA
MYR	MYERS FLAT FPD	MYERS FLAT
NPA	NAPA CFD	ST HELENA
NAP	NAPA FD	NAPA
NSH	NAPA STATE HOSPITAL FD	IMOLA
NLE	NAS LEMOORE FD	LEMOORE
NAT	NATIONAL CITY FD	NATIONAL CITY
NAF	NAVAL AIR FACILITY FD	EL CENTRO
NPG	NAVAL SUPPORT ACTIVITY MB FD	MONTEREY
TNT	NAVAL WEAPONS STN FD - CONCORD	CONCORD
NVW	NAVAL WEAPONS STATION SEAL BEACH	SEAL BEACH
NWC	NAWS CHINA LAKE FD	CHINA LAKE
NED	NEEDLES FD	SAN BERNARDINO
NCO	NEVADA CFD (CDF NV CO.)	AUBURN
NEV	NEVADA CITY FD	NEVADA CITY
NCC	NEVADA CO. CONSOLIDATED FD	GRASS VALLEY
NRK	NEWARK FD	NEWARK
NBY	NEWBERRY SPRINGS FD	NEWBERRY SPRINGS
NEW	NEWCASTLE FPD	NEWCASTLE
NSP	NEWHALL FPD	TULELAKE
NWM	NEWMAN VFD	NEWMAN
NPB	NEWPORT BEACH FD	NEWPORT BEACH
NCS	NICASIO VFD	NICASIO
NIC	NICE VFD	NICE
NIL	NILAND FD	NILAND
NOR	NORCO FD	NORCO
NCN	NORTH CENTRAL FPD	KERMAN
NCD	NORTH COUNTY FPD (XMY)	CASTROVILLE
NCF	NORTH COUNTY FPD (XSD)	FALLBROOK
NKP	NORTH KERN STATE PRISON FD	DELANO
NSJ	NORTH SAN JUAN FPD	NORTH SAN JUAN
NTF	NORTH TAHOE FPD	TAHOE CITY
NTI	NORTH TREE FIRE, INTERNATIONAL	MARYSVILLE
Alpha by A	gency E-15	Alpha by Agency

ID	AGENCY	CITY
NWF	NORTHERN CALIF WOMEN'S FACILITY	STOCKTON
NCY	NORTHERN CALIF YOUTH AUTHORITY	STOCKTON
NWR	NORTHERN WILDLIFE REFUGE	
NAG	NORTHROP GRUMMAN FD	HAWTHORNE
NRS	NORTHSTAR FD	TRUCKEE
NWL	NORTHWEST LASSEN FD	MCARTHUR
NOV	NOVATO FPD	NOVATO
CAP	NPS, CABRILLO NM	SAN DIEGO
CNP	NPS, CHANNEL ISLANDS NP	VENTURA
DVP	NPS, DEATH VALLEY NM	DEATH VALLEY
DPP	NPS, DEVILS POSTPILE NM	THREE RIVERS
EOP	NPS, EUGENE O'NEILL NHS	MARTINEZ
FPP	NPS, FORT POINT NHS	SAN FRANCISCO
GNP	NPS, GOLDEN GATE NRA	SAUSALITO
JMP	NPS, JOHN MUIR NHS	MARTINEZ
JTP	NPS, JOSHUA TREE NP	TWENTYNINE PALMS
LNP	NPS, LASSEN VOLCANIC NP	MINERAL
BNP	NPS, LAVA BEDS NM	TULELAKE
MNP	NPS, MOJAVE NP	BARSTOW
MWP	NPS, MUIR WOODS NM	MILL VALLEY
WRP	NPS, PACIFIC WEST REGION	SAN FRANCISCO
PIP	NPS, PINNACLES NM	PAICINES
RNP	NPS, POINT REYES NS	POINT REYES
RWP	NPS, REDWOOD NP	CRESCENT CITY
SMP	NPS, SANTA MONICA MTNS NRA	THOUSAND OAKS
KNP	NPS, SEQUOIA-KINGS CANYON NP	THREE RIVERS
WNP	NPS, WHISKEYTOWN NRA	WHISKEYTOWN
YNP	NPS, YOSEMITE NP	YOSEMITE NP
OKR	OAK RUN VFC	OAK RUN
ODF	OAKDALE FD	OAKDALE
ODL	OAKDALE RURAL FPD	OAKDALE
OKL	OAKLAND FD	OAKLAND
OLY	OAKLEY FPD	OAKLEY
OCD	OCCIDENTAL FCS	OCCIDENTAL
OCE	OCEANO CSD FIRE	OCEANO
OCS	OCEANSIDE FD	OCEANSIDE
000	OCOTILLO FPD	OCOTILLO
OWF	OCOTILLO WELLS VFD	BORREGO SPRINGS
OES	OFFICE OF EMERGENCY SERVICES	MATHER
OLC	OLANCHA/CARTAGO FD	OLANCHA
OSV	OLD STATION VFC	OLD STATION
Alpha by A	gency E-16	Alpha by Agency

ID	AGENCY	CITY
OLI	OLIVEHURST PUD	OLIVEHURST
OAP	ONTARIO AIRPORT FD	ONTARIO
ОТО	ONTARIO FD	ONTARIO
ONC	OPERATION NORTHERN CALIF - USFS	REDDING
OSC	OPERATION SOUTHERN CALIF - USFS	RIVERSIDE
OPH	OPHIR HILL FPD	CEDAR RIDGE
ORC	ORANGE COUNTY FIRE AUTHORITY	ORANGE
OCF	ORANGE COVE FPD	ORANGE COVE
ORG	ORANGE FD	ORANGE
OCT	ORCUTT FPD	ORCUTT
ORD	ORD BEND FPD	GLENN
ORK	ORICK CSD	ORICK
ORL	ORLAND FPD	ORLAND
OLN	ORLEANS VFD	ORLEANS
ORO	OROVILLE FD	OROVILLE
OXD	OXNARD FD	OXNARD
PGF	PACIFIC GROVE FD	PACIFIC GROVE
PFC	PACIFICA FD	PACIFICA
PDF	PAINTED CAVE VFD	SANTA BARBARA
PAL	PALA FD	PALA
PSP	PALM SPRINGS FD	PALM SPRINGS
PAF	PALO ALTO FD	PALO ALTO
PCV	PALO CEDRO VFC	PALO CEDRO
PMV	PALOMAR MOUNTAIN VFD	PALOMAR MOUNTAIN
PRA	PARADISE FD	PARADISE
PRD	PARADISE FPD	BISHOP
PAJ	PAJARO VALLEY FD	FELTON
PRK	PARKS RFTA F&ES	DUBLIN
PAR	PARLIER FD	SANGER
PAS	PASADENA FD	PASADENA
PRF	PASO ROBLES FD (OES)	PASO ROBLES
PAT	PATTERSON FD	PATTERSON
PCP	PEARDALE/CHICAGO PARK FPD	CHICAGO PARK
PEB	PEBBLE BEACH CSD FD	MONTEREY
PFD	PECHANGA FD	TEMECULA
PNS	PENINSULA FPD	LAKE ALMANOR PENINSULA
PNV	PENN VALLEY FPD	PENN VALLEY
RYN	PENRYN FD	PENRYN
PTL	PETALUMA FD	PETALUMA
PET	PETROLIA FPD	PETROLIA
PHL	PHILLIPSVILLE FPD	PHILLIPSVILLE

Alpha by Agency

Alpha by Agency

ID	AGENCY	CITY
PIE	PIEDMONT FD	PIEDMONT
PRC	PIERCY FPD	PIERCY
PIK	PIKE CITY VFD	PIKE CITY
PRG	PINE RIDGE VFD	SHAVER LAKE
PVY	PINE VALLEY FPD	PINE VALLEY
POE	PINOLE FD	PINOLE
PIO	PIONEER FPD	SOMERSET
PSM	PISMO BEACH FD	PISMO BEACH
PCF	PLACER CFD	AUBURN
ROC	PLACER CONSOLIDATED FD	AUBURN
PHF	PLACER HILLS FPD	MEADOW VISTA
PLW	PLANTINA/WILDWOOD VFC	WILDWOOD
PLG	PLEASANT GROVE FD	PLEASANT GROVE
PVF	PLEASANT VALLEY FC	DORRIS
PVS	PLEASANT VALLEY STATE PRISON FD	COALINGA
PBF	PLUMAS/BROPHY FPD	WHEATLAND
PEF	PLUMAS/EUREKA FD	BLAIRSDEN
PLY	PLYMOUTH FD	PLYMOUTH
PTM	POINT MONTARA FPD	HALF MOON BAY
PVL	PORTERVILLE FD	PORTERVILLE
POR	PORTOLA FD	PORTOLA
PMT	POST MOUNTAIN VFD	HAYFORK
POT	POTTER VALLEY CSD	POTTER VALLEY
POW	POWAY FD	POWAY
PRT	PRATTVILLE/ALMANOR FD	CANYONDAM
PSF	PRESIDIO FD	SAN FRANCISCO
POM	PRESIDIO OF MONTEREY FD	MONTEREY
PRN	PRINCETON FPD	PRINCETON
PVT	PRIVATE RESOURCES	
QUI	QUINCY FPD	QUINCY
RAD	RANCHO ADOBE FPD	PENNGROVE
RCF	RANCHO CUCAMONGA FPD	RANCHO CUCAMONGA
RSF	RANCHO SANTA FE FPD	RANCHO SANTA FE
RBU	RED BLUFF FD	RED BLUFF
RCV	REDCREST VFD	REDCREST
RDN	REDDING FD	REDDING
RED	REDLANDS FD	REDLANDS
RDB	REDONDO BEACH FD	REDONDO BEACH
RDW	REDWAY FPD	REDWAY
RWO	REDWOOD CITY FD	REDWOOD CITY
PTA	REDWOOD COAST VFD	POINT ARENA
	<b>E</b> 40	

ID	AGENCY		CITY
RVF	REDWOOD VALLEY/CALPELL	A FPD	REDWOOD VALLEY
REE	REEDLEY FD		REEDLEY
RES	RESCUE FPD		RESCUE
RFB	RESERVATION FPD		SANTA YSABEL
RIA	RIALTO FD		RIALTO
RMD	RICHMOND FD		RICHMOND
RIN	RINCON VALLEY FPD		SANTA ROSA
RIO	RIO DELL FPD		RIO DELL
RLN	RIO LINDO ACADEMY FIRE B	RIGADE	HEALDSBURG
RVS	RIO VISTA FD		RIO VISTA
RIP	RIPON FPD		RIPON
RVD	RIVERDALE PUD FD		RIVERDALE
RVC	RIVERSIDE CFD		PERRIS
RIV	RIVERSIDE FD		RIVERSIDE
ROK	ROCKLIN FD		ROCKLIN
RDO	RODEO/HERCULES FPD		HERCULES
ROH	ROHNERT PARK DPS FD		ROHNERT PARK
RSV	ROSEVILLE FD		ROSEVILLE
ROS	ROSS DEPT OF PUBLIC SAFE	ΤY	ROSS
RVY	ROSS VALLEY FD		SAN ANSELMO
RAR	ROUGH AND READY FPD		ROUGH & READY
RUM	RUMSEY INDIAN RANCHERIA	FD	BROOKS
RSP	RUNNING SPRINGS WD		RUNNING SPRINGS
RRF	RUSSIAN RIVER FPD		GUERNEVILLE
RYR	RYER ISLAND FPD		RIO VISTA
SCR	SACRAMENTO FD		SACRAMENTO
MAF	SACRAMENTO INTER'L AIRPO	ORT FD	SACRAMENTO
SAC	SACRAMENTO METROPOLIT	AN FD	SACRAMENTO
SWR	SACRAMENTO NAT'L WILDLI	FE REFUGE	WILLOWS
SRC	SACTO REG'L FIRE/EMS COM	IM. CNTR	SACRAMENTO
SRV	SACRAMENTO RIVER FPD		COLUSA
STH	SAINT HELENA FD		SAINT HELENA
SLA	SALIDA FPD		SALIDA
SLS	SALINAS FD		SALINAS
SLR	SALINAS RURAL FPD		SALINAS
SCV	SALMON CREEK VFC		MIRANDA
CCL	SALMON RIVER VF&R		FORKS OF THE SALMON
SAL	SALTON CITY CSD		SALTON CITY
SSB	SALTON SEA BEACH VFD		SALTON SEA BEACH
SLV	SALYER VFD		SALYER
SAM	SAMOA PENINSULA FD		SAMOA
Alpha by Ag	gency E-	-19	Alpha by Agency

ID	AGENCY	CITY
AND	SAN ANDREAS FPD	SAN ANDREAS
SAF	SAN ANTONIO VFD	PETALUMA
SAV	SAN ARDO VCF	SAN ARDO
SBN	SAN BENITO CFD	MONTEREY
BDC	SAN BERNARDINO CFD	SAN BERNARDINO
BDO	SAN BERNARDINO FD	SAN BERNARDINO
SBR	SAN BRUNO FD	SAN BRUNO
SND	SAN DIEGO FIRE AND LIFE SAFETY SVCS	SAN DIEGO
SDR	SAN DIEGO RURAL FD	JAMUL
SFR	SAN FRANCISCO FD	SAN FRANCISCO
SGB	SAN GABRIEL FD	SAN GABRIEL
SJS	SAN JOSE FD	SAN JOSE
SJB	SAN JUAN BAUTISTA FD	SAN JUAN BAUTISTA
LUR	SAN LUIS NAT'L WILDLIFE REFUGE	LOS BANOS
SLC	SAN LUIS OBISPO CFD	SAN LUIS OBISPO
SLO	SAN LUIS OBISPO FD	SAN LUIS OBISPO
SMI	SAN MANUEL FD	SAN BERNARDINO
SMC	SAN MARCOS FPD	SAN MARCOS
SNM	SAN MARINO FD	SAN MARINO
CFS	SAN MATEO CF	FELTON
MEO	SAN MATEO FD	SAN MATEO
SMG	SAN MIGUEL CFPD (XSD)	SPRING VALLEY
SMF	SAN MIGUEL CFPD (XSL)	SAN MIGUEL
SNO	SAN ONOFRE FD	SAN CLEMENTE
SPF	SAN PASQUAL FD	ESCONDIDO
SPI	SAN PASQUAL RESERVATION FD	VALLEY CENTER
QUN	SAN QUENTIN STATE PRISON FD	SAN QUENTIN
SNR	SAN RAFAEL FD	SAN RAFAEL
SRM	SAN RAMON VALLEY FPD	SAN RAMON
SAN	SANGER FD	SANGER
STA	SANTA ANA FD	SANTA ANA
SBC	SANTA BARBARA CFD	SANTA BARBARA
STB	SANTA BARBARA FD	SANTA BARBARA
CNT	SANTA CLARA CFD	LOS GATOS
SNC	SANTA CLARA FD	SANTA CLARA
NET	SANTA CRUZ CECC	SANTA CRUZ
CRZ	SANTA CRUZ CFD	FELTON
SCZ	SANTA CRUZ FD	SANTA CRUZ
SFS	SANTA FE SPRINGS FD	SANTA FE SPRINGS
SMV	SANTA MARGARITA VFD	SANTA MARGARITA
SMR	SANTA MARIA FD	SANTA MARIA
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ID	AGENCY	CITY
SMA	SANTA MONICA FD	SANTA MONICA
SPA	SANTA PAULA FD	SANTA PAULA
SRS	SANTA ROSA FD	SANTA ROSA
SNT	SANTEE FD	SANTEE
SAR	SARATOGA FPD	SARATOGA
SIT	SAUSALITO FD	SAUSALITO
SCH	SCHELL/VISTA FPD	SONOMA
SCT	SCOTIA VFC	SCOTIA
SVF	SCOTT VALLEY FPD (XSK)	GREENVIEW
SCO	SCOTTS VALLEY FPD (XCZ)	SCOTTS VALLEY
TSR	SEA RANCH FD	SEA RANCH
SEA	SEASIDE FD	SEASIDE
SEB	SEBASTOPOL FD	SEBASTOPOL
SEI	SEIAD VALLEY FC	SEIAD VALLEY
SLM	SELMA FD	SELMA
SHS	SHASTA CFD	REDDING
SHC	SHASTA COLLEGE FPD	REDDING
SHA	SHASTA FD	SHASTA
SLF	SHASTA LAKE FPD	SHASTA LAKE
SHL	SHAVER LAKE FD	SHAVER LAKE
SHE	SHELTER COVE CSD	WHITEHORN
SVV	SHELTER VALLEY VFD	JULIAN
SHR	SHERIDAN FPD	SHERIDAN
SHI	SHINGLETOWN VFC	SHINGLETOWN
SAD	SIERRA ARMY DEPOT FES	HERLONG
SER	SIERRA CFPD #1	SIERRAVILLE
SRA	SIERRA CITY FPD	SIERRA CITY
JSC	SIERRA CONSERVATION CENTER	JAMESTOWN
SMD	SIERRA MADRE FD	SIERRA MADRE
SIE	SIERRA VALLEY FPD	CHILCOOTI
SIS	SISKIYOU CFD	YREKA
SKY	SKYWALKER RANCH FB	SAN RAFAEL
SFP	SMARTVILLE FPD	SMARTVILLE
SMT	SMITH RIVER FPD	SMITH RIVER
SOL	SOLANA BEACH FD	SOLANA BEACH
SLD	SOLEDAD VFD	SOLEDAD
SVG	SOLVANG FD	SOLVANG
SSR	SONOMA COUNTY DFS (CSA #40)	SANTA ROSA
SON	SONOMA FD	SONOMA
SOF	SONORA FD	SONORA
SBY	SOUTH BAY FD	LOS OSOS
Alpha by A	gency E-21	Alpha by Agency

ID	AGENCY	CITY
SCF	SOUTH COAST FPD	GUALALA
SOC	SOUTH COUNTY FIRE AUTHORITY (XSM)	SAN CARLOS
MDT	SOUTH LAKE CFPD	MIDDLETOWN
SLT	SOUTH LAKE TAHOE FD	SOUTH LAKE TAHOE
SOM	SOUTH MARIN FPD	MILL VALLEY
SMY	SOUTH MONTEREY CFPD	MONTEREY
SPS	SOUTH PASADENA FD	SOUTH PASADENA
SPL	SOUTH PLACER FPD	GRANITE BAY
SSF	SOUTH SAN FRANCISCO FD	SO. SAN FRANCISCO
SCC	SOUTH SANTA CLARA CFD	MORGAN HILL
SOT	SOUTH TRINITY VFD	MAD RIVER
SYR	SOUTH YREKA FPD	YREKA
TSH	SOUTHERN INYO FPD	SHOSHONE
EGL	SPAULDING CSD FD	SUSANVILLE
SWV	SPEEDWAY VFD	HIGHLAND
SPR	SPRECKELS VFD	SPRECKELS
SPV	SPRING VALLEY VFD	SAN JOSE
SQU	SQUAW VALLEY FD	OLYMPIC VALLEY
STL	STANDISH LITCHFIELD FPD	STANDISH
SUF	STANFORD UNIV. FIRE MARSHAL	STANFORD
SSL	STANISLAUS CONSOLIDATED FPD	MODESTO
SFW	STANISLAUS COUNTY FIRE WARDEN	MODESTO
SNB	STINSON BEACH FPD	STINSON BEACH
STO	STOCKTON FD	STOCKTON
SBG	STONES BENGARD CSD	SUSANVILLE
STW	STRAWBERRY VFD	STRAWBERRY
SUC	SUISUN CITY FD	SUISUN CITY
SUI	SUISUN FPD	FAIRFIELD
SNY	SUNNYVALE DPS FD	SUNNYVALE
SST	SUNSHINE SUMMIT VFD	WARNER SPRINGS
SSN	SUSAN RIVER FPD	SUSANVILLE
SUS	SUSANVILLE FD	SUSANVILLE
SBF	SUTTER BASIN FPD	ROBBINS
STC	SUTTER CFD	YUBA CITY
SUT	SUTTER CREEK FD	SUTTER CREEK
SYC	SYCUAN FD	EL CAJON
TFT	TAFT FD	TAFT
TAY	TAYLORSVILLE FPD	TAYLORSVILLE
THC	TEHACHAPI FD	TEHACHAPI
TCR	TEHAMA CFD	RED BLUFF
TEL	TELEGRAPH RIDGE VFC	REDWAY
		Alaba bu Assa

ID	AGENCY	CITY
TEM	TEMPLETON FPD	TEMPLETON
TEN	TENNANT FD	TENNANT
THO	THORNTON FPD	THORNTON
TIB	TIBURON FPD	TIBURON
TIM	TIMBER COVE FPD	CAZADERO
ТОМ	TOMALES VFC	TOMALES
TOR	TORRANCE FD	TORRANCE
TOS	TOSCO CORPORATION FD	MARTINEZ
TRY	TRACY FD	TRACY
TRV	TRAVIS AFB FD	TRAVIS AFB
TRN	TRINIDAD VFD	TRINIDAD
TCC	TRINITY CENTER CSD	TRINITY CENTER
TRK	TRUCKEE FPD	TRUCKEE
TLC	TULARE CFPD	VISALIA
TLR	TULARE FD	TULARE
TIA	TULE RIVER INDIAN RESERVATION FD	PORTERVILLE
TUL	TULELAKE MULTI-COUNTY FIRE DIST.	TULELAKE
TLU	TUOLUMNE CFD	SONORA
TUO	TUOLUMNE FPD	TUOLUMNE
TUR	TURLOCK CITY F&ES	TURLOCK
TRL	TURLOCK RURAL FPD	TURLOCK
TWA	TWAIN HARTE FPD	TWAIN HARTE
TWP	TWENTY-NINE PALMS FD	TWENTY-NINE PALMS
TWO	TWO ROCK VFD	PETALUMA
UCB	UC CAMPUS FIRE MARSHAL (XAL)	BERKELEY
UCR	UC CAMPUS FIRE MARSHAL (XRI)	RIVERSIDE
USB	UC CAMPUS FIRE MARSHAL (XSB)	SANTA BARBARA
UCD	UC DAVIS FD	DAVIS
UCI	UC IRVINE CAMPUS FIRE MARSHAL	IRVINE
UCZ	UC SANTA CRUZ FPS	SANTA CRUZ
UCL	UCLA CAMPUS FIRE MARSHAL	LOS ANGELES
UKH	UKIAH FD	UKIAH
UKV	UKIAH VALLEY FD	UKIAH
UNU	UNION CITY FD	UNION CITY
UTC	UNITED TECHNOLOGY CORPORATION	SAN JOSE
PSS	UNOCAL/MOLY CORPORATION	MOUNTAIN PASS
UPL	UPLAND FD	UPLAND
UPP	UPPER LAKE FPD	UPPER LAKE
CGT	US COAST GUARD FD TWO ROCK	PETALUMA
GYP	US GYPSUM COMPANY	EL CENTRO
ANF	USFS, ANGELES NF	LANCASTER
	—	

Alpha by Agency

ID	AGENCY		CITY
CNF	USFS, CLEVELAND NF		EL CAJON
ENF	USFS, EL DORADO NF		PLACERVILLE
INF	USFS, INYO NF		BISHOP
KNF	USFS, KLAMATH NF		YREKA
TMU	USFS, LAKE TAHOE BASIN	IMU	SOUTH LAKE TAHOE
LNF	USFS, LASSEN NF		SUSANVILLE
LPF	USFS, LOS PADRES NF		GOLETA
MNF	USFS, MENDOCINO NF		WILLOWS
MDF	USFS, MODOC NF		ALTURAS
NZF	USFS – NORTH ZONE		REDDING
PNF	USFS, PLUMAS NF		QUINCY
USF	USFS, REGION V HEADQU	ARTERS	VALLEJO
BDF	USFS, SAN BERNARDINO	NF	SAN BERNARDINO
SQF	USFS, SEQUOIA NF		PORTERVILLE
SHF	USFS, SHASTA/TRINITY N	F	REDDING
SNF	USFS, SIERRA NF		FRESNO
SRF	USFS, SIX RIVERS NF		FORTUNA
SZF	USFS – SOUTH ZONE		RIVERSIDE
STF	USFS, STANISLAUS NF		SONORA
TNF	USFS, TAHOE NF		NEVADA CITY
VAC	VACAVILLE FD		VACAVILLE
VVF	VACAVILLE FPD		VACAVILLE
VLJ	VALLEJO FD		VALLEJO
VCF	VALLEY CENTER FPD		EL CAJON
VFV	VALLEY FORD VFD		VALLEY FORD
VOM	VALLEY OF THE MOON FP	D	SONOMA
VSP	VALLEY SPRINGS FD		VALLEY SPRINGS
VAN	VAN DEUSEN VFD		BRIDGEVILLE
AFV	VANDENBERG AFB FD		VANDENBERG AFB
VNC	VENTURA CFD		CAMARILLO
VEN	VENTURA FD		VENTURA
VER	VERNON FD		VERNON
VCV	VICTORVILLE FD		VICTORVILLE
VJS	VIEJAS RESERVATION FD		ALPINE
VSA	VISALIA FD		VISALIA
VTA	VISTA FD AND FPD		VISTA
WAL	WALNUT GROVE FD		WALNUT GROVE
BKS	WARNER BROTHERS FD		BURBANK
WSR	WARNER SPRINGS RANCE	H FD	WARNER SPRINGS
WSC	WASCO STATE PRISON - 0	CDC	WASCO
WMR	WATERLOO/MORADA RUF	RAL FPD	STOCKTON
Alpha by A	gency	E-24	Alpha by Ag

Alpha by Agency

ID	AGENCY	CITY
WTS	WATSONVILLE FD	WATSONVILLE
WEA	WEAVERVILLE VFD	WEAVERVILLE
WED	WEED VFD	WEED
WEO	WEOTT VFD	WEOTT
WAC	WEST ALMANOR CSD	CHESTER
WCV	WEST COVINA FD	WEST COVINA
WPL	WEST PLAINFIELD FPD	DAVIS
WPT	WEST POINT VFPD	WEST POINT
EYO	WEST SACRAMENTO FD	WEST SACRAMENTO
WSF	WEST STANISLAUS CFPD	PATTERSON
WVV	WEST VALLEY VFD	COTTONWOOD
WVF	WESTHAVEN VFD	TRINIDAD
WML	WESTMORLAND FD	WESTMORLAND
WPF	WESTPORT FD	MODESTO
WPV	WESTPORT VFD	WESTPORT
WWO	WESTWOOD FD	WESTWOOD
VFC	WHALE GLUCH VFC	WHITEHORN
WHE	WHEATLAND FD	WHEATLAND
SWF	WHEELER CREST FPD	BISHOP
WHR	WHITE HAWK RANCH VFC	CLIO
WMT	WHITE MOUNTAIN FPD	BENTON
WHT	WHITETHORN VFD	WHITETHORN
WFC	WHITMORE VFD	WHITMORE
WIL	WILLIAMS FPD	WILLIAMS
WCR	WILLOW CREEK FPD	WILLOW CREEK
WOF	WILLOW OAK FPD	WOODLAND
WWR	WILLOW RANCH FPD	NEW PINE CREEK
WLL	WILLOWS FD	WILLOWS
WLO	WILLOWS RURAL FPD	WILLOWS
WLM	WILMAR FD	PETALUMA
WLT	WILTON FPD	WILTON
WND	WINDSOR FPD	WINDSOR
WNT	WINTERHAVEN FPD	WINTERHAVEN
WFD	WINTERS FD	WINTERS
WOO	WOODBRIDGE FPD	WOODBRIDGE
WDF	WOODFORDS VFD	MARKLEEVILLE
WLF	WOODLAKE FD	WOODLAKE
WLA	WOODLAND AVENUE FPD	MODESTO
WDL	WOODLAND FD	WOODLAND
WOD	WOODSIDE FPD	WOODSIDE
YER	YERMO CSD	YERMO

ID	AGENCY	CITY
YOL	YOLO FD	YOLO
YPC	YOSEMITE CONCESSION SVCS CORP FD	YOSEMITE NP
YRE	YREKA VFD	YREKA
YUB	YUBA CITY FD	YUBA CITY
YWD	YUIMA WATER DISTRICT	EL CAJON
ZAM	ZAMORA FPD	ZAMORA
ZAY	ZAYANTE FPD	FELTON
ZEN	ZENIA-KETTEPOM VFD	ZENNA
NV-AAU	AIRPORT AUTHORITY OF WASHOE CO.	RENO
NV-CCF	CARSON CITY FD	CARSON CITY
NV-CLC	CENTRAL LYON CFPD	DAYTON
NV-CLK	CLARK CFD	LAS VEGAS
NV-EFK	EAST FORK FPD	MINDEN
NV-ELK	ELKO FD	ELKO
NV-ELY	ELY FD	ELY
NV-FAL	FALLON FD	FALLON
NV-FRN	FERNLEY FD	FERNLEY
NV-HEN	HENDERSON FD	HENDERSON
NV-LVS	LAS VEGAS F&R	LAS VEGAS
NV-LOV	LOVELOCK FD	LOVELOCK
NV-MIN	MINERAL FD	MINERAL
NV-HAS	NAVAL AIR STATION FALLON	FALLON
NV-NEL	NELLIS AFB FD	LAS VEGAS
NV-NDF	NEVADA DIVISION OF FORESTRY	CARSON CITY
NV-NTS	NEVADA TEST SITE	HENDERSON
NV-NLT	NORTH LAKE TAHOE FPD	INCLINE VILLAGE
NV-NLV	NORTH LAS VEGAS FD	LAS VEGAS
NV-PAH	PAHRUMP VALLEY FRS	PAHRUMP
NV-RND	RENO FD	RENO
NV-SPK	SPARKS FD	SPARKS
NV-SCF	STOREY CFD	VIRGINIA CITY
NV-TDO	TAHOE/DOUGLAS FPD	ZEPHYR COVE
NV-TOF	USFS, TOIYABE/HUMBOLDT NF	BRIDGEPORT
NV-YER	YERINGTON/MASON VALLEY FPD	YERINGTON
AZ-YMA	YUMA FD	YUMA
AZ-YCS	YUMA MARINE CORPS AIR STATION FD	MCAS - YUMA

<b>OPERATIONAL AREA IDENTI</b>	FIERS
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	REGION I
ID	Operational Area (County)
XLA	Los Angeles, Area "A"
XLB	Los Angeles, Area "B"
XLC	Los Angeles, Area "C"
XLE	Los Angeles, Area "E"
XLF	Los Angeles, Area "F"
XLG	Los Angeles, Area "G"
XOR	Orange
XSL	San Luis Obispo
XSB	Santa Barbara
XVE	Ventura

	REGION III
ID	Operational Area (County)
XBU	Butte
XCO	Colusa
XGL	Glenn
XLS	Lassen
XMO	Modoc
XPU	Plumas
XSH	Shasta
XSI	Sierra
XSK	Siskiyou
XSU	Sutter
XTE	Tehama
XTR	Trinity
XYU	Yuba

	REGION V
ID	Operational Area (County)
XFR	Fresno
XKE	Kern
XKI	Kings
XMA	Madera
XMP	Mariposa
XMD	Merced
XTU	Tulare

REGION II		
ID	Operational Area (County)	
XAL	Alameda	
XCC	Contra Costa	
XDN	Del Norte	
XHU	Humboldt	
XLK	Lake	
XMR	Marin	
XME	Mendocino	
XMY	Monterey	
XNA	Napa	
XBE	San Benito	
XSF	San Francisco	
XSM	San Mateo	
XSC	Santa Clara	
XCZ	Santa Cruz	
XSO	Solano	
XSN	Sonoma	

REGION IV		
ID	Operational Area (County)	
XAP	Alpine	
XAM	Amador	
XCA	Calaveras	
XED	El Dorado	
XNE	Nevada	
XPL	Placer	
XSA	Sacramento	
XSJ	San Joaquin	
XST	Stanislaus	
XTB	Tahoe Basin Area	
XTO	Tuolumne	
XYO	Yolo	

REGION VI	
ID	Operational Area (County)
XIM	Imperial
XIN	Inyo
XMN	Mono
XRI	Riverside
XBO	San Bernardino
XSD	San Diego

## CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION



## **KENWOOD MODEL TK-790**

## **MOBILE RADIO**



## OPERATING INSTRUCTIONS AND FREQUENCY LISTS



## 1. KENWOOD TK-790 CDF MOBILE RADIO

The Kenwood Model TK-790 mobile radio was built for CDF using a standard TK-790 mobile radio with special software developed for CDF. Some of the features of the radio are:

- 254 Channels
- Alpha-numeric display
- 45 Watts power output
- 3 Groups with 1 group user modifiable (COMMAND GROUP)
- 16 Repeater tones available
- User modifiable scan with 2 levels of priority
- Direct access channel button
- Display Dim Button

The 254 channels are divided into 3 groups and those groups are as follows:

- Group 1 TCU Specific (44 Channels)
- Group 2 Local Government Frequencies Statewide (60 Channels)
- Group 3 CDF/OES Standard Statewide-All Radios (154 Channels)

In addition to the groups listed above there is a "Command Group". This command group can be any number of channels and the frequencies are taken from *any* of the above listed Groups. This command group can be created or deleted at any time.

Group 3 is standard in *all* CDF Kenwood Radios statewide.

This radio is capable of 16 CTCSS (Continuous Tone-Coded Squelch System) or in other words, it has 16 tones capable of accessing mountain top repeaters. The CDF/USFS/NPS standard is now 14 tones statewide.

The next page shows a picture of the CDF Control Head.





The button operation of each function of the control head is listed below:

- 1. **POWER** Push this button once to turn on the radio and push again to turn off. On most TCU vehicles the radio is tied to the ignition switch or the battery switch. On a few vehicles the radio is "hot" all the time and will need to be manually turned off after vehicle use. *Note: The Kenwood Mobile radio is designed not to loose any operator selectable features on power down. The radio will"remember" what is last told to do upon re-power.*
- 2. *UP/DOWN ARROWS GROUPS* These two buttons control the group locations and are located just to the right of the power button. Press the up arrow to go up from groups 1 thru 3. Press the down arrow to go from groups 3 down to 1. Pushing again below group 1 puts you into the "Command Group".
- 3. *DISPLAY AREA* The display area shows the following:
  - 1. Tone Selected in upper left corner.1 thru 16
  - 2. P1 shows that channel is assigned as Priority 1
  - 3. *P2 shows that channel is assigned as Priority 2*
  - 4. C Shows Command group is currently selected.
  - 5. OST "Operator Selectable Tone" Shows that a tone as been selected.
  - 6. Down arrow shows that channel is in scan list.
  - 7. Channel Name displayed up to 11 characters.
  - 8. **MON** button-Used with the SCN button to define Priority 2.
  - 9. SCN button. Used to turn scan on and off.
  - 10. **DIM** button. Used to dim the display.
  - 11. **D/A** . Used to add or delete a channel from scan.
  - 12. UP/Down Arrows. Located on far right. Used to change tones.
  - 13. **HC.**Home channel. Button is programmed to go directly to TCU local net from any location.



- 14. **TA** Direct or Car to Car.
- 15. SQL Squelch control.
- 16. AUXC Use this to add or delete a channel into the command group.

### 2. Operations

- <u>Display.</u> The display shows the following operations:
  - 1. Group Number
  - 2. Channel Number with Channel name
  - 3. Tone Selected.
  - 4. Scan icon shows if scan turned on
  - 5. Black down arrow shows if channel is in scan list
  - 6. © icon shows if channel is in command group
  - 7. OST shows Operator Selectable Tone is on for that channel.
  - 8. P1 Shows on channel assigned as for Priority 1
  - 9. P2 Shows on channel assigned as Priority 2
- <u>Home Channel (HC).</u> This button is used if you want to go to your home channel, which on TCU radios is Local net. You can go to this channel directly from anywhere in the radio. When this button is pushed again, it takes you back to the previously selected channel.
- <u>Talk Around (TA)</u> This is your Direct, or car-to-car function. Pressing this button puts you into a direct mode (no repeater).
- <u>SQL</u> This is the Kenwood function of squelch control. With the scan off, press this and the display will show numbers related to a specific squelch setting. Most of our radios are set between 4 and 7. Take it to Zero then back off to 4 etc.
- <u>AUX C</u> Toggle this button to add or delete a channel from the command group. This feature is discussed further in these instructions.
- <u>Scan Feature Press</u> (SCN) to start or stop the scanning sequence. You can **only** scan one group at a time. You **cannot** scan multiple groups! When you activate scan, a tone sounds, and the Scan icon appears on the display. When a signal is received while scanning, the scan will halt, the audio is unmuted, and the channel name appears in the display.

This radio has the capability to add or delete any channel from within the same group by simply rotating the channel selector knob to the desired channel you want to add (or delete) in scan, and pressing the D/A (Delete/Add) button. Press once to add a channel and press again to remove the channel from scan. The steps to add or delete a channel to scan are as follows:



- 1. Confirm which group you are going to scan.
- 2. Make sure Scan is OFF.
- 3. Rotate channel selector knob to channel you want to add to scan.
- 4. Press D/A button. The Down arrow appears in the display. That channel is now in the scan list. Move on to the next channel to add and repeat above.
- 5. To remove a channel from the scan list, repeat as above except when you go to that channel you will press the D/A button and that will remove the down arrow icon, and that channel will be removed from the scan list.

*Note: There is a way to temporarily remove an unwanted channel from the scan list by doing the following:* 

While in the scan mode, and the scan is stopped on the channel you want to temporarily delete from scan, press the D/A button once and this channel is now out of scan. This channel will return to the scan list if the radio is powered down or the scan button is pressed again.

• <u>Priority Scan Mode</u> This radio has the capability of two levels of Priority Scanning. They are called Priority 1 and Priority 2. Priority 1 takes precedence over all other scanned channels in the group including Priority 2. Priority 2 takes over all scanned channels except Priority 1. By this means, you now have a way to have any number of channels in scan and have two levels of priority.

An example of this would be setting up a scan group on a incident with Command and Tactical channels as Priority 1 and 2 and other lesser priority channels in the Scan group.

### Priority 1 Channel Assignment

In the CDF radio, the Priority 1 is fixed and is *always* the channel that is displayed. In other words, when you want TCU Local Net to be priority, rotate to that channel and stop. This channel is now your Pri 1 channel. You will *always* transmit on this channel when in scan.

Priority 2 Channel Assignment

- 1. Turn Scan off.
- 2. Rotate channel selector knob to desired channel for Priority 2.
- 3. While holding down the SCN button, press the MON button 2 times.
- 4. Priority 2 channel is now set . PP shows in the display. (Programmable Priority)
- 5. To make another channel Priority 2, repeat step 1.



# Note: To activate any of the Scan or Priority features or to change any feature of scan or priority, the SCAN feature must be turned off.



• <u>Using the Operator Selectable Tone</u> The CDF version Tk-790 mobile radio uses the two up/down arrow keys, highlighted below, to cycle thru up to 16 custom CTCSS encode tones for access to repeaters. For safety, the radio operating system does not permit OST (Operator Selectable Tone) on channels that have been pre-assigned a transmit tone via programming.



### **Operator** Selectable **T**one memory:

The CDF version TK-790 automatically memorizes the last OST the user set for a particular channel, even when the radio is turned off or unplugged. Different operator selectable tones can be assigned, or re-assigned, individually to any channel desired. You are no longer left with one tone for all channels as with the Midlands. You can have different tones for different channels. For example, a fire in the Valley Springs area utilizing Command II could be set to Command II - Tone 2, and TCU Local – Tone 2. Similarly, a fire in the East Sonora area could be set to Command II – Tone 3, and TCU Local – Tone 7. In each case, the optimum repeater would then automatically be utilized. The radio will always remember which tone the user assigned, or if no operator selectable tone was assigned to a particular channel at all. Once tones have been assigned for a particular incident, the operator need only change channels - tone selection becomes automatic.

Currently CDF/USFS/NPS are using a total of 14 tones from the present 8 found on the Midlands. Tones 1 thru 14 are standard statewide.

This radio has the ability to setup a user programmable command group separate from the other 3 groups. This group is capable of any channels from any of the groups. There is one button (AUX C) that adds or deletes channels from this group.



### COMMAND GROUP OPERATION

To use this command group, simply do the following: (Turn Scan off 1<sup>st</sup>!)

- 1. Use the channel select knob to dial up the desired channel to add to the command group from *any* group in the radio.
- 2. Press and hold the (AUX C) button until it beeps and a momentary icon displays ©.
- 3. Continue same procedure as above for any additional channels you want to add.
- 4. When finished selecting channels you want in the command group, press down arrow until the icon © shows in the display. (*This will be one step below Group 1*)
- 5. You are now in the command group. You must now re-define Priority 1 and 2 channels if so desired at this time and any channels in scan that you want.
- 6. To remove channels from the command group press (AUX C) until the channel disappears and you hear a beep.
- 7. If you want to remove the whole group at once, simply press and hold the AUX C button for 10 seconds and the entire group will be gone.

It is important to understand that the command group is USER programmable. YOU define what you want in this group. This group will, in most cases, be your own IA group for your station area. When you go out of county, you can erase that group and build a new one specific for that area or incident. Once you return to quarters, you can rebuild the command group that you feel is most appropriate for your IA area.

Listed on the next pages are several drawings showing the operation in detail:



Operations



Note: There has been some confusion as to why Group 1 icon appears at the same time as the C icon when you are in the command group. It makes it difficult to tell if you are in the Command group as the C is a little hard to see. This is the way the radio was designed-it was made to do more than the designers had intended it to do.

REMEMBER!: Scan must be <u>off</u> when adding or deleting channels in the command group.



## **COMMAND GROUP OPERATION**







#### **CDF COMMAND NETS**

CMD-1 and CMD-2 Command Net repeater locations statewide are shown on the map on pages 74-75. They are used as command frequencies for communications between ECC's, Incident Commanders, aircraft, and command staff. They may be used for flight following and for in route communications between responding and returning mobile units. Use car-to-car whenever possible.

CDF Command Nets 3-10 (below) are in the implementation phase for various locations throughout the state. These frequencies are available to ECC's and Incident Communications Unit Leaders for assignment, consistent with licensing and repeater deployment, in pre-approved areas of the state.

Designator	<u>Simplex</u>	<u>Repeater</u>	Kenwood Group 3	Kenwood Ch. #
CDF CMD 1	151.3550	159.3000	CMD1	1
CDF CMD 2	151.2650	159.3300	CMD2	2
CDF CMD 3	151.3400	159.3450	CMD3	3
CDF CMD 4	151.4000	159.3750	CMD4	4
CDF CMD 5	151.3700	159.2850	CMD5	5
CDF CMD 6	151.2500	159.3600	CMD6	6
CDF CMD 7	151.4600	159.3900	CMD7	7
CDF CMD 8	151.4450	159.3450	CMD8	8
CDF CMD 9	151.1750	159.4500	CMD9	9
CDF CMD 10	151.1900	159.2250	CMD10	10

#### LOCAL NET

This is usually the primary dispatch and operations net for each Unit. Most initial attack dispatching is done on the local net. Local net is used for emergency traffic, aircraft-to-ECC communications and routine administrative traffic, when the net is clear. Repeater locations are shown on the Unit maps.

#### TACTICAL NETS

Tactical frequencies are assigned to specific Units to allow for incident on-scene radio communications. Their purpose is to provide each incident a different frequency(s) to minimize interference in multiple incident situations, and to free up the local net for its designated purposes. Tac Nets are used for communications on an incident between the Incident Commander and the resources assigned to that incident. ECC's will manage and assign Tac Nets. Charts of Tac Net frequencies and assignments are located on page 12 of this booklet.

#### CALIFORNIA TRAVEL NET

169.1250 Car-to-Car 168.3250 Repeater

The California Travel Net is a USFS radio frequency shared with CDF under a formal agreement. It is also known as Region 5 Travel Net.

The Travel Net is designated for use by resources in route to or from an incident outside of their home ranger unit or forest. California Travel Net is also available for use as a flight following and local aircraft dispatching frequency. THIS FREQUENCY IS RESTRICTED FROM ALL TACTICAL USE AND ADMINISTRATIVE COMMUNICATIONS.

Authorized uses are:

- 1) emergency vehicle-to-dispatch communications
- 2) emergency car-to-car communications
- 3) initial call, recall and redirection of personnel and equipment
- 4) as a contact channel during long distance assignments
- 5) flight following and local aircraft dispatching

Strike teams or personnel dispatched out of their local area are to monitor the Travel Net while in route to an assigned incident or mobilization/staging area.

The California Travel Net map is shown on page 84.

#### CONTINUOUS TONE CONTROL SELECTION SYSTEM (CTCSS)

CTCSS encoding provides continuous sub-audible tone to access mobile relays (repeaters) and provide access to receive tone protected radios.

Tone 1	110.9 Hz	Tone 9	100.0 Hz
Tone 2	123.0 Hz	Tone 10	107.2 Hz
Tone 3	131.8 Hz	Tone 11	114.8 Hz
Tone 4	136.5 Hz	Tone 12	127.3 Hz
Tone 5	146.2 Hz	Tone 13	141.3 Hz
Tone 6	156.7 Hz	Tone 14	151.4 Hz
Tone 7	167.9 Hz	Tone 15	162.2 Hz
Tone 8	103.5 Hz	Tone 16	192.8 Hz

\*NOTE: The above tones are the standard approved by CDF, Firescope Communications, BLM, BIA and the USFS.

#### **AIRCRAFT COMMUNICATIONS**

#### AIR TACTICS NETS

Air Tactics 1	166.6750 MHz	USFS
Air Tactics 2	169.1500 MHz	USFS
Air Tactics 3	169.2000 MHz	USFS
Air Tactics 4	151.2800 MHz	CDF
Air Tactics 5	151.2950 MHz	CDF
Air Tactics 6	151.3100 MHz	CDF
Air Tactics 21	151.2725 MHz	CDF
Air Tactics 22	151.2875 MHz	CDF

The air operations frequencies are shared throughout California by CDF and USFS. Communications on the air tactics net are restricted to air-to-air use. There is one exception: CDF Helitack crews on <u>CDF incidents</u> may, <u>with approval</u> from the Air Tactical Supervisor, transmit on CDF Air Tactics 4, 5, or 6 (whichever is assigned) for <u>necessary coordination</u> with their own helicopter. No other ground units are authorized to transmit on the air tactics nets.

#### AIRGUARD (AIR SAFETY GUARD)

168.625 MHz

This frequency is monitored at all times by all USFS, CDF and BLM aircraft and ECC's. Its use is restricted to aircraft, ECC's, Air Attack and Helitack Bases. This frequency is restricted to the following uses:

- 1) Air-to-air emergency contact and coordination
- 2) Ground-to-Air emergency contact. Including emergency hailing by crews in critical danger.
- 3) Initial call, recall, and re-direction of aircraft when no other contact frequency is available.

#### VHF-AM RADIO FREQUENCIES

VHF-AM ("Victor") radio frequencies are available for incident use. These frequencies are shared throughout California by CDF and USFS. Due to FCC regulations and the need for close frequency management, use of these frequencies is <u>prohibited without the approval of the Region Command Center</u>. ECC's will place request for VHF frequencies with the appropriate Region Command Center (North Ops or South Ops). The following frequencies are authorized for CDF/USFS use:

VHF	FAA-FCC
122.850	Air to Air Operations
122.900	Air to Air Operations
123.975	Air Tanker Base Ground Control/Operations
122.975	Air to Air Operations Helicopter
123.025	Air to Air Operations Helicopter
122.750	Air to Air Operations
122.925	Air to Air Operations

The Region Command Centers may assign other VHF frequencies for specific incident support, depending on current FAA/FCC authorizations.

#### AIRCRAFT COMMUNICATIONS- CONTINUED

#### AIR-TO-GROUND COMMUNICATIONS

• Designated air-to-ground frequencies for use in California are:

151.2200 MHz CDF air-to-ground 170.0000 MHz USFS air-to-ground 167.9500 MHz BLM air-to-ground

- Use the air-to-ground frequency assigned by ECC. May also be a tactical net.
- Normally, incident air-to-ground traffic is restricted to the Incident Commander and/or Operations Section Chief and helitack crews. Individuals, crews, engines and dozers needing air support should place their request with the IC, Ops or other appropriate line officer on the assigned tactical net.
- CDF, USFS and BLM contract aircraft, including airtankers, lead planes, air attack planes, smokejumper planes and helicopters can dial up any frequency between 150 and 174 MHz. Copters 202 and 205 also have LF and UHF capability.
- CDF Call-When-Needed (CWN) air attack planes have limited frequencies. ECC's will assign the air-toground frequency to be used by CWN aircraft.
- ECC's are responsible for frequency management. Check with ECC if in doubt about an assigned frequency. Report serious interference to ECC ASAP.
- All CDF helicopters and air attack aircraft have tone encoders and can activate mobile relays when necessary. Repeater activation will be minimized to reduce interference, using direct whenever possible.
- I.C.'s should know which air-to-ground frequency is normally assigned for initial attack in their area. Unless the ECC advises otherwise, assume <u>all aircraft</u> will be monitoring this frequency.
- If you are unable to contact aircraft on assigned air-to-ground frequency, call ECC for assistance.
- Remember to talk to aircraft when they are off to one side. <u>Directly overhead = No contact.</u>
## **CDF VHF RADIO FREQUENCIES**

UNIT	ECC	NET	Simplex	Repeater		
Statewide		CMD-1	151.3550	159.3000		
Statewide		CMD-2 Calif Travel	151.2650 169.1250	159.3300 168.3250		
Statewide		Air-guard	168.6250			
Statewide		CDF Air-Ground	151.2200			
Statewide		Air Tactics 4 Air Tactics 5	151.2800 151.2950			
Statewide		Air Tactics 6	151.3100			
Statewide		Air Tactics 21	151.2725			
Statewide		Air Tactics 22	151.2875			

## NORTHERN CALIFORNIA

Unit	AAB	ECC Call Sign		Simplex	Repeater	Air Tactic	TacNet
BTU	CIC	Oroville	Local	151.4000	159.3750	5	5,9,11,12
HUU	FOT	Fortuna	Local	151.2500	159.4050	6	3,7,10
LNU	STS	St Helena	Local West	151.4600	159.3900	6	5,6,10
			Local East	151.3400	159.3150	6	
LMU		Susanville	Local	151.2500	159.4050	4	1,3,10
MEU	UKI	Howard Forest	Local	151.3850	159.2700	6	2,3,4,6,11
NEU	O17	Grass Valley	Local West	151.3250	159.3600	4	2,5,9,
			Local East	154.1300	159.4950	4	
CZU		Felton	Local	151.3700	159.2850	5	3,4,6
SCU		Morgan Hill	Local	151.4450	159.3450	5	2,6,9,10
SHU	RDD	Redding	Local	151.1600	159.2700	5	1,9,11,12
SKU	SIY	Yreka	Local	151.3250	159.3600	4	1,4,7,8,9,10,11,12
TGU		Red Bluff	Local	151.3700	159.2850	5	1,3,4,11,12
MRN		Woodacre	Local	154.3700	154.3700	6	

## SOUTHERN CALIFORNIA

Unit	AAB ECC Call Sign			Simplex	Repeater	Air Tactic	TacNet
AEU		Camino	Local	151.1900	159.2250	4	2,8,9
FKU	FAT	Fresno	Local 1	151.3850	159.2700	6	7,8,10
MMU		Mariposa	Local 2 Local	151.1600 151.4600	159.3600	6	6.7.8
RRU	HMT	Perris	Local West 1	151.3850	159.3600	6	2,10
			Local East 3	151.1300	158.9250		
BDU		San Bernardino	Local 1	151.4450	159.3900	6	5,8
			Local 2	151.3250	159.3150		
BELL	307	Monterey	Local 3	151.2500 151.2500	159.4050 159.4050	5	34712
MVU	RNM	Monte Vista	Local	151.1900	159.2250	4 & 22	5,8
SLU	PRB	San Luis	Local	151.3250	159.3150	4	2,3,7,8
τυυ	PTV	Visalia	Local	154.3850 151.1900	156.0300 159.2250	6	3,8
TCU	022	San Andreas	Local	151.1750	159.4500	4	2,8

## CDF TACTICAL FREQUENCY ASSIGNMENT

The following chart shows the CDF tactical frequencies and where they are approved for use by ground resources. Due to the far-reaching effects, use of these tactical frequencies by aircraft requires additional planning at the regional or state level.

CAR/CAR = DIRECT

**X** = Primary Tac Nets authorized for use at unit level

Route all other requests for Tactical Frequencies to your local ECC.

		TAC	Fraguanay	ртн						0711	2011	0000	SKI I	тон		
Units	in use	as Loca	al Net	TAC	Frequency	ыо	поо	LINU	LIVIU	IVIEU	INEU	CZU	300	380	SNU	IGU
				01	151.1450				Х					Χ	Х	X
			SHU	02	151.1600					Х	Х		Х			
		RRU	TCU	03	151.1750		Х		Х	Х		Х				X
		AEU	MVU	04	151.1900					Х		Х			Х	X
		BEU	LMU	05	151.2500	Х		Х			Х					
NEU	SKU	BDU	SLU	06	151.3250			Х		Х		Х	Х			
		LNU-	East	07	151.3400		Х								Х	
	CZU	MRN	TGU	08	151.3700										Х	
		MEU	RRU	09	151.3850	Х					Х		Х	Х	Х	
			BTU	10	151.4000		Х	Х	Х				Х		Х	
		SCU	BDU	11	151.4450	Х				Х				Х	Х	X
	LNU-	West	MMU	12	151.4600	Х								х	Х	X

Units in use as Local Net			ТАС	Frequency	AEU	BDU	BEU	FKU	MMU	MVU	RRU	SLU	тси	τυυ	
				01	151.1450										
		FKU	SHU	02	151.1600	Х						Х	Х	Х	
		RRU	TCU	03	151.1750			Х					Х		Х
	τυυ	AEU	MVU	04	151.1900			Х							
BDU	BEU	HUU	LMU	05	151.2500		Х				X				
NEU	SKU	BDU	SLU	06	151.3250					х					
		LNU-	East	07	151.3400			Х	Х	Х			Х		
	CZU	MRN	TGU	08	151.3700	Х	Х		х	х	Х		x	Х	Х
	FKU	MEU	RRU	09	151.3850	Х									
			BTU	10	151.4000				х			Х			
		SCU	BDU	11	151.4450										
	LNU-	West	MMU	12	151.4600			х							