

**SANTA CLARA COUNTY
LOCAL FIRE SERVICE AND RESCUE MUTUAL AID PLAN**

APPENDIX 1 - RADIO COMMUNICATIONS PLAN

Revised Date: March 2026
Next Revision Date: March 2027

A. Purpose of the Plan

1. To provide for the usage of available radio frequencies by the fire service during periods of major emergencies where multi-fire agencies are assigned to the incident.
2. To address the following type of multi-agency responses:
 - a. Automatic or mutual aid between two departments on first-alarm assignments.
 - b. Mutual aid responses to large multi-agency incidents such as major fires, explosions, hazardous materials incidents, multi-casualty incidents, and wildland fires within Santa Clara County.
 - c. Major incidents outside of Santa Clara County in a strike team response.
3. No fire agency may transmit on any radio frequency without a valid license issued by the Federal Communications Commission (FCC) for the specific frequency, or an authorization issued by the agency holding the FCC license. Nothing within this plan authorizes the use of any radio frequency not licensed to the agency or specifically authorized by the licensee.
 - a. All XSC Fire Agencies have agreed and give unilateral authorization to program and use Agency specific radio frequencies for all in County, Fire Agency Partners to use during any in county Mutual Aid Incident.
4. Agency dispatch frequencies shall not be used for tactical purposes unless specifically authorized by the Agency.

B. Definitions

The following definitions of communication terms shall apply as designated.

1. **DISPATCH (Primary)** communications shall mean those radio communications typically used to alert and dispatch resources to incidents and coordinate with stations for move up and coverage of stations. Dispatch communications typically includes radio traffic and communications for single response incidents for the Incident Commander and Communications Center to use to communicate. Dispatch communications may also be used as a travel frequency for mutual aid resources to coordinate their response to an incident or cover location.
2. **TRAVEL** communications shall mean those radio communications from units responding to an incident outside of their own jurisdiction and the Communications Center or Incident Commander responsible for the incident. Typical communications would be those advising of response, ETA's, en-route changes, and similar information affecting the unit's ability to reach its destination and to return to its own jurisdiction. A Dispatch or Command Channel may be used as an alternate Travel Channel.

3. **COMMAND** communications shall mean those radio communications between the Incident Commander, Command and General Staff, various subordinate division and group supervisors, and the Incident Communications Center pertaining to command and control of the incident. This does not include communications between the division and group supervisors and their respective assigned units.
4. **TACTICAL** communications shall mean those radio communications between the division and group supervisors and their respective assigned units for the purpose of carrying out their assigned missions. Tactical frequencies are used to coordinate resources assigned to a function or fire ground operations for purposes of coordination to meet incident objectives. Tactical frequencies are used to reduce operations traffic on the Dispatch/ Command Frequency. Tactical frequencies are typically not monitored by Communications Centers. All tactical channels on any band shall comply with NFPA 1221 and be programmed to transmit in conventional, analog mode and mixed mode received.
5. **AIR/GROUND** communications shall mean those radio communications between aircraft assigned to the incident and a division or group supervisor or higher staff on the ground. Routine Ground to Ground communications are not allowed.
6. **PATCHING** – a connection of two different channels, i.e. SJS TGCMD 21 to SJS TGSBFIRE1. Patching can be temporary or permanent.
7. **SIMULCASTING** – when multiple repeaters transmit the same traffic at the same time, e.g. CNT V radio system.
8. **MULTICASTING**- Different frequencies tied together, all transmitting the same traffic at the same time. Only the dispatcher hears all the transmissions.
9. **SVRCS** radio system is made up of trunked channels in the 700 mhz range. This system allows for interoperability between fire, police, OES, and public works for communications.
 - a. SB Fire Talk Groups are command channels. Talk Groups 1-11 are pre-assigned to agencies for interoperability use. Talk Groups 12-16 are available for use through the online checkout system or contacting Santa Clara County Dispatch. See Attachment A for list.
 - b. SB Interop Talk Groups are command channels available for use to communicate through the online checkout system or contacting Santa Clara County Dispatch.
 - c. SB Law Talk Groups are encrypted law enforcement command channels available for use to communicate through the online checkout system or contacting Santa Clara County Dispatch.

- d. LPTAC channels are low power analog simplex channels available for use on scene for tactical communications. These channels are pre-assigned to agencies for use. See Attachment B for list.

C. Available Radio Frequencies, Their Limitations and Recommended Order of use

1. Frequencies available for **TRAVEL** communications for Mutual Aid incidents within Santa Clara County:

- *Primary* dispatch channel of incident owner
- SBFIRE channel assigned to incident owner
- VFIRE 21 - * Mutual Aid Intersystem, See OES Bulletin 28 for usage
- Command (CMD) channel of incident owner
- Out of County: California Emergency Services Radio System (CESRS)

The California Emergency Services Radio System (CESRS) may now be utilized as a travel net. Strike Teams or other resources in travel status should use the "CESRS Direct" talk-around channel for line-of-sight communications. Use of CESRS repeaters is limited to those circumstances when users are not able to make contact using CESRS Direct.

2. Frequencies available for **COMMAND (CMD)** communications for Mutual Aid incidents within Santa Clara County:

- Command (CMD) channel of incident owner
- XSC Command (CMD) 30 Countywide Mutual Aid Command Channel (Formerly known as CMD 20)
- SBFIRE 1-16
- For MTZ and SRA areas, VHF conventional channels shall be used
- Patching of command channels is discouraged due to the confusion caused by different channel names
- Patching of trunking and conventional channels is not permitted.

3. Frequencies available for **TACTICAL (TAC)** communications for incidents within Santa Clara County:

- Tactical channel(s) of incident owner
- VFIRE 22-26 Mutual Aid Intersystem
- XSC TAC 40 Countywide Mutual Aid Tactical Channel
- LPTAC
- For MTZ and SRA areas, VHF conventional channels shall be used
- CALCORD Interservice coordination*

**The CALCORD radio channel is available for use as a "Scene-of-Action" coordination channel between command units of law enforcement, fire, emergency medical, emergency services, public works, and similar agencies operating at the scene of a major emergency or disaster. This is not available for communications between units of similar agencies; i.e., fire-to-fire, police-to-police, etc.*

4. **CAL FIRE** statewide frequencies may be installed in local fire agency radios, but may **only** be used on a multi-agency incident involving CAL FIRE or when CAL FIRE has given **prior** authorization. Authorization for such use extends only to the individual incident for which it has been granted.
5. **AIRGUARD** - This frequency is monitored at all times by all USFS, CAL FIRE and BLM aircraft and forest agency dispatch/command centers. The frequency is restricted and to be used only by ground personnel for Ground-to-Air emergency Contact, including emergency hailing by crews in critical danger.
6. **REDNET** - This is a trunking talkgroup that interconnects all the communications centers in Santa Clara County. It is used to request and verify mutual aid resources and broadcast other information that is of interest to all fire agencies.

D. **XSC Mutual Aid - Agency Shared Zones**

1. Shared zones are agreed upon with all XSC Fire Agencies and coordinated through the Fire Radio Operations Group (FROG). Each agency has their own shared zone. Shared zones provide the ability for all agencies to program critical radio channels into their radio, in a designated zone for that agency.
 - i) When providing mutual aid to another department, you will switch to that agencies zone in order to successfully comply with that departments Incident Communications Plan.
 - ii) Agencies will provide an updated Shared Zone to the FROG (Fire Radio Operations Group) each year by February 1.
 - iii) The shared zones are not required to match your dedicated home zone, however should reflect all channels you would use for a incident Communications Plan.
 - iv) All agencies will program a Shared Zone from every XSC department into their radio. The location of that zone will be based on upon your needs and surrounding agencies. Ex: Gilroy may not need Palo Alto close to them in the radio.

E. **Communications Procedures**

1. **ACTIVATION** - The Local Mutual Aid Plan may be activated by a fire officer of any of the participating fire departments, following that department's procedures.
2. Requests shall indicate:

- a. Agency(s) requested (Name the Public Safety Answering Point [PSAP] for the agency needed on RED NET)
 - Example; "County Fire, Santa Clara City, San Jose Fire - Mountain View Fire with mutual aid request." Wait for the agency requested to acknowledge they are receiving the radio traffic. Once the agencies have acknowledged then continue with the activation request.
 - b. Requesting jurisdiction.
 - c. Incident Name, Incident Type
 - d. Jurisdiction Incident Number
 - e. Reporting Location-Fire Department Zone Number from appropriate Mutual Aid Sheet in Appendix 3.
 - f. Map Location (US National Grid, Thomas Brothers)
 - g. Frequency Assignments
 - Command Frequency
 - Tactical Frequency
 - Travel Frequency.
 - Provide travel frequency if the agency chooses to use one different than their dispatch or CMD channels.
 - Example; " Travel-Contact, Santa Clara County on SBFIRE 11"
 - h. Resources requested
 - i. Probable assignment
3. Units dispatched will respond on the appropriate mutual aid frequency using "**Clear Text**," acknowledging response and destination. Example: "Santa Clara County on SBFIRE 11 ,Engine 66 responding to rendezvous area at Foothill College, El Monte Fire Station."
 4. **Portable Radio Identification** - Individual personnel on portable radios will be identified by position on the unit, i.e.; by department, vehicle type, unit number and position. Example:
 - "Engine 47, Firefighter, charge the line"
 - "Engine 47, Firefighter 2, hold your position"
 - "Engine 47, Captain, what is your location?"
 5. Mutual aid resources will be activated in sequence as listed in **RESOURCE ORDER**. (See Appendix 3)

6. Mutual aid resources will be dispatched in one or more of the following resource configurations:
 - a. **Single Resource** - An individual piece of equipment and its personnel complement, or an established crew or team of individuals with an identified work supervisor that can be used on an incident.
 - b. **Alarm Assignment** - Two (2) type 1 engines, one (1) truck, one (1) chief officer.
 - c. **Strike Team** - Specified combinations of the same kind and type of resources, with common communications and a leader that may be pre-established and sent to an incident, or formed at an incident. Five (5) resources of like type and kind, one (1) chief officer.
 - d. **Task Force** - A group of Five (5) resources of mixed type and kind, with common communications and a leader that may be pre-established and sent to an incident, or formed at an incident.
7. The **maximum resource commitment** of each department is listed in *Appendix 3*. The maximum commitment (MAX) shall be interpreted as the total combination of fire apparatus resources available from a single jurisdiction. Chief officers do not count as a fire apparatus resource.

Example: San Jose MAX = 6. Combinations may include: Four (4) type 1 engines, two (2) trucks; three (3) type 1 engines, two (2) type 6 engines, one (1) water tender; etc.

8. **Automatic aid response** between two departments on first-alarm assignments is considered a single department alarm and all radio communications should take place on a radio frequency utilized by the department in whose jurisdiction the alarm is located.

Example: "Morgan Hill, Gilroy Engine 47 responding."

The departments involved should provide a procedure for such response including identifying the radio frequencies or Talk Groups involved. Where one of the departments involved does not have capability for operating on the other's day-to-day channels, and cannot reasonably obtain the channel, then the following channels should be used in the order stated:

SBFIRE Channel Assigned to agency having jurisdiction
XSC Command (CMD) 30 Countywide Mutual Aid
VFIRE 21 Mutual Aid Intersystem
SBCALL Channel for hailing or assigned SBINT Channel

9. The communications center for the authority having jurisdiction having the incident will handle emergency radio communications for the incident. In cases of Internal Disaster for a communications center, the alternate dispatch center (Appendix 3) will assume responsibility for communications.

10. Apparatus shall report status to requesting jurisdiction at time of response via assigned travel frequency.

Example: "Gilroy on SBFIRE 4, E69 responding."

11. The **Santa Clara County Area Fire/ Rescue Operational Coordinator** shall be notified and updated on incident status through Santa Clara County Communications** when five (5) or more mutual aid resources are requested. It shall be the Coordinator's responsibility to assemble additional resources in the event available local resources are depleted.
12. All requests for strike teams to or from other counties are made via the Fire/ Rescue Operational Area Coordinator through Santa Clara County Communications.
13. Santa Clara County Communications will provide communications coordination during travel to assembly for strike teams leaving the County. SBFIRE 11 is the assigned channel for mutual aid coordination of resources leaving or retuning to the County

**The CAL FIRE Morgan Hill Emergency Command Center Is the alternate Fire/Rescue Operational Area Coordinator.

F. Radio Reprogramming

Radio reprogramming, channel name changes, and the addition of radio channels will be coordinated to minimize the impact to entire operational area. The renaming of radio channels and resultant reprogramming will be finalized each year by November 1st to be submitted to the FROG committee, who will submit to Firescope. All changes will become effective each year on the first Monday in May. Programming should be completed during the month of May.

G. California Statewide Channel Plan

For radio communications outside of Santa Clara County please see the FIRESCOPE Radio Communications Guidelines MACS 441-1 most current edition.. This FIRESCOPE document is available as a free download at <https://firescope.caloes.ca.gov/publications>
It is also available at <https://www.sccfd.org/xsc-files/xsc-mutual-aid-plan/>

Further reference for available channels and use guidelines can be found in California Interoperability Field Operations Guide (Cal-IFOG) available from Cal OES.

Available Channels and Recommended Order of Use Reference Guide

Travel

In County

Dispatch Channel of Incident Owner
Command Channel of Incident Owner
SBFIRE Channel of Incident Owner
VFIRE 21

Out of County

SBFIRE 11 for rendezvous coordination
CESRS and CESRSD California Emergency Services Radio System

Command

Command Channel of Incident Owner
XSC Command 30 (Formely XSC Command 20)
VFIRE 21 Mutual Aid Intersystem
8CAFIRE2
VTAC 36-38 Portable Repeaters

Tactical

Tactical Channel(s) of Incident Owner
VFIRE 22-26
XSC Tactical 40
VTAC 11-14
CALCORD

Additional Frequencies Available for Major Incidents

(Require Cal Fire Authorization)

Cal Fire Command 1
Cal Fire Command 2
Cal Fire Command 4
Cal Fire Tactical 2
Cal Fire Tactical 6
Cal Fire Tactical 9
Cal Fire Tactical 10

Air/Ground

CDF Air/Ground 1,2,3
AIRGUARD (Air Safety Guard)

CALIFORNIA EMERGENCY SERVICES RADIO SYSTEM (CESRS)
 Mountain Top Location and Tone (03/08/2013)

Site Location	County	CTSS Tone	CAL FIRE Unit #	
			Channel # (Group 3)	Name w/ Call Sign
Mt. Zion	Amador	2		
Telegraph Hill +	Tuolumne	15	27	AEU Camino
Black Mt.	Fresno	4	35	BDU San Bernardino
Round Mt.	Kern	5	46	BEU Monterey
Mt. Lukens	Los Angeles	1	21	BTU Oroville
Mt. Hauser	Los Angeles	4	17	CZU Felton
Loma Prieta Peak	Santa Clara	1	43	FKU Fresno
Pacheco Peak +	San Benito	13	12	HUU Fortuna
Williams Hill	Monterey	2	22	LMU Susanville
Mt. Lowe	San Luis Obispo	3	14	LNU St. Helena
Red Mt.	Ventura	4	11	MEU Howard Forrest
Strawberry Peak	San Bernardino	2	42	MMU Mariposa
Cuyamaca Peak	San Diego	3	33	MVU Monte Vista
Bloomer Mt.	Butte	1	23	NEU Grass Valley
Sugarloaf Mt.	Shasta	2	31	RRU Perris
Antelope Mt.	Siskiyou	1	16	SCU Morgan Hill
Soda Creek Ridge +	Siskiyou	12	24	SHU Redding
Hatchet Mt.	Shasta	3	26	SKU Yreka
Likely Mt.	Lassen	1	34	SLU San Luis
Shaffer Mt.	Lassen	3	44	TCU San Andreas
Hough Mt.	Plumas	4	25	TGU Red Bluff
Boreal Ridge	Nevada	3	41	TUU Visalia
Mt. St. Helena	Sonoma	5	CalFIRE CTCSS Tones	
Mt. Tamalpais	Marin	3	T1=110.9 Hz	T9=100.0 Hz
Mt. Diablo	Contra Costa	6	T2=123.0 Hz	T10=107.2 Hz
Laughlin Ridge	Mendocino	4	T3=131.8 Hz	T11=114.8 Hz
Cahto Peak +	Mendocino	14	T4=136.5 Hz	T12=127.3 Hz
Mt. Pierce	Humboldt	2	T5=146.2 Hz	T13=141.3 Hz
Red Mt.	Del Norte	1	T6=156.7 Hz	T14=151.4 Hz
Scout Peak	El Dorado	4	T7=167.9 Hz	T15=162.2 Hz
Pine Grove	Lyon (Nevada)	2	T8=103.5 Hz	T16=192.8 Hz
Sherwin Summit	Mono	1		

Base/Mobile/Portable Radio transmit frequency - 154.980 MHz and receive frequency - 153.755 MHz

+ These sites have been provided by CalFIRE.

Attachment A

South Bay Interoperability Channel Assignments

- SB Fire 1- San Jose Fire
- SB Fire 2- Santa Clara County Fire
- SB Fire 3- Sunnyvale DPS
- SB Fire 4- Gilroy Fire
- SB Fire 5- Mountain View Fire
- SB Fire 6- Palo Alto Fire
- SB Fire 7- Morgan Hill/ South Santa Clara County Fire
- SB Fire 8- Milpitas Fire
- SB Fire 9- Santa Clara City Fire
- SB Fire 10- NASA/ Ames Fire
- SB Fire 11- Mutual Aid Coordination

SB Fire 12-16 are available to reserve for local needs by using the online reservation process or through contact to Santa Clara County Communications.

Attachment B

LP Tac Assignments:

Note: LP TACS will be programmed as analog with a PL Tone of 156.7

Agency	LPTAC	1	2	3	4	5	6	7	8	9	10	11	12
San Jose Fire					X	X	X	X	X				X
Santa Clara County Fire			X	X								X	
Sunnyvale DPS					X								X
Gilroy Fire												X	X
Mountain View Fire						X		X					
Palo Alto Fire						X			X				
Morgan Hill/ South Santa Clara County Fire								X	X				
Milpitas Fire									X		X		
Santa Clara City Fire							X			X			
Nasa/ Ames Fire				X							X		
VTA Countywide		X											